

# Receiving Report

Date: 15-01-22

Batch No: 131340

Supplier: KLX

Dart P/O: 27119

Packing Slip: Yes ☒ No ☐  
 Invoice: Yes ☒ No ☐  
 Receipt: Cash ☐ Cr ☒  
 New Supplier Yes ☐ No ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐  
 Waybill Attached: Yes ☒ No ☐  
 Shipment Complete: Yes ☒ No ☐ N/A ☐  
 QC18 Inspection ☐ N/A ☒  
 Work Order ☐ N/A ☒

## Discrepancies

Part Number	Description	Quantity Ordered	Quantity Rec'd	Quantity Short	Quantity Inspected	Quantity Rejected	Comment / NCR Number

Initials of Receiver QC12 SP

Production/Admin: ☐  
 Date ☐  
 Received/Costing ☐  
 Initial ☐

Location ☐



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO27119

Purchase Order Date 1/19/2015

PO Print Date 1/19/2015

Page Number 1 of 10

Order From :  
KLX INC.  
88289 EXPEDITE WAY

VU-KLX01

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

CHICAGO, IL 33172  
USA

Contact Name  
Vendor Phone 305-925-2600  
  
Ship To Contact  
Ship To Phone  
Ship Via: FedEx Overnight collect  
Ship Acct:

Buyer  
Customer POID  
Customer Tax # 10127-2607  
Terms Net 30  
Currency USD  
FOB Destination-Collect

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price
1	CR264SS3-02	Rivet, Cherry	1/21/2015 Yes 1/21/2015	FN	200.00 Each	\$0.10
Line Total:						
2	CR3213-4-04	Rivet	1/21/2015 Yes 1/21/2015		100.00 Each	\$0.25
Line Total:						
3	CR3213-4-05	RIVET	1/21/2015 Yes 1/21/2015	FN	100.00 Each	\$0.10

Note:

1/19/2015

501501-22



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO27119**

Purchase Order Date 1/19/2015

PO Print Date 1/19/2015

Page Number 2 of 10

Order From :  
KLX INC.  
88289 EXPEDITE WAY

VU-KLX01

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

CHICAGO, IL 33172  
USA

Contact Name  
Vendor Phone 305-925-2600  
  
Ship To Contact  
Ship To Phone  
Ship Via: FedEx Overnight collect  
Ship Acct:

Buyer  
Customer POID  
Customer Tax # 10127-2607  
Terms Net 30  
Currency USD  
FOB Destination-Collect

Line Total:

CR3213-4-1	Cherry Rivet	1/21/2015 FN	100.00	Each	80.00
		Yes			
		1/21/2015			

Line Total:

CR3213-4-2	Cherry Rivet	1/21/2015 FN	500.00	Each	300.00
		Yes			
		1/21/2015			

Line Total:

CR3213-4-3	Cherry Rivet	1/21/2015 FN	200.00	Each	50.00
		Yes			
		1/21/2015			

Line Total:

801501-22

Note:

1/19/2015



Dart Aerospace Ltd.  
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Hawkesbury, ON K6A 1K7  
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## PURCHASE ORDER

Purchase Order ID PO27119

Purchase Order Date 1/19/2015

PO Print Date 1/19/2015

Page Number 3 of 10

Order From :  
KLX INC.  
88289 EXPEDITE WAY

VU-KLX01

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

CHICAGO, IL 33172  
USA

Contact Name

Vendor Phone 305-925-2600

Ship To Contact

Ship To Phone

Ship Via: FedEx Overnight collect

Ship Acct:

Buyer

Customer POID

Customer Tax # 10127-2607

Terms Net 30

Currency USD

FOB Destination-Collect

Chantal Lavoie

CR3213-5-03

Cherry Rivet

1/21/2015

200.00

Yes

Each

1/21/2015

Line Total:

CR1242-4-2

RIVET

1/21/2015

200.00

Yes

Each

1/21/2015

Line Total:

CR3523-4-02

RIVET

1/21/2015

200.00

Yes

Each

1/21/2015

Line Total:

MS17984-C413

Quick Release Pin

1/21/2015 FN

12.00

Yes

Each

1/21/2015

Line Total:

Note:

8815-01-22

1/19/2015





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

\*\*\*OUTSTANDING PO REPRINT\*\*\*

Purchase Order ID PO27119

Purchase Order Date 1/19/2015

PO Print Date 1/22/2015

Page Number 5 of 13

Order From : VU-KLX01

KLX INC.  
88289 EXPEDITE WAY

CHICAGO, IL 33172  
USA

Ship To : DART AEROSPACE LTD

1270  
ABERD  
EEN  
HAWKE  
SBURY,  
ON  
K6A  
1K7  
CANAD  
A

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	305-925-2600	Customer POID	
Vendor Fax	305-507-7191	Customer Tax #	10127-2607
Ship To Contact		Terms	Net 30
Ship To Phone		Currency	USD
		FOB	Destination-Collect
Ship Method	FedEx Overnight collect		
Ship Acct			

Line Nbr	Item ID Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable	Req Qty	Extended Price
11	MS20257-3-7200	PIANO HINGE	1/21/2015 Yes 1/21/2015	60.00 f	\$113.70
	10 PCS OF 6 FT				
				Line Total:	\$113.70
12	MS20600-AD4W5	Blind Rivet	1/21/2015 Yes 1/21/2015	300.00 Each	\$54.00
				Line Total:	\$54.00
13	MS20601-AD4W3	Rivet	1/21/2015 Yes 1/21/2015	300.00 Each	\$57.00

815-01-22

1/19/2015



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID: PO27119

Purchase Order Date: 1/19/2015

PO Print Date: 1/19/2015

Page Number 5 of 10

Order From: KIX INC.  
8889 EXPEDITE WAY

VU-KLX01

Ship To: DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

CHICAGO, IL 33172  
USA

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	305-925-2600	Customer POID	
		Customer Tax #	10127-2607
Ship To Contact		Terms	Net 30
Ship To Phone		Currency	USD
Ship Via:	FedEx Overnight collect	FOB	Destination-Collect
Ship Acct:			

MS20615-4M20

Rivet

1/21/2015

50.00

Yes

Each

1/21/2015

Line Total:

MS20615-3M3

RIVET

1/21/2015

200.00

Yes

Each

1/21/2015

Line Total:

MS20819-12J

Sleeve

1/21/2015

10.00

Yes

Each

1/21/2015

Line Total:

MS210421A

Locknut

1/21/2015 FN

1,200.00

Yes

Each

1/21/2015

Note:

1/19/2015

SP15-01-22



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO27119

Purchase Order Date 1/19/2015

PO Print Date 1/19/2015

Page Number 6 of 10

Order From :  
KLX INC.  
88289 EXPEDITE WAY

VU-KLX01

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

CHICAGO, IL 33172  
USA

Contact Name

Vendor Phone 305-925-2600

Ship To Contact

Ship To Phone

Ship Via: FedEx Overnight collect

Ship Acct:

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

USD

Destination-Collect

Line Total:

MS2104215

Nut

1/21/2015 FN

Yes

1/21/2015

500.00

Each

500.00

Line Total:

MS21043-3

Nut

1/21/2015 FN

Yes

1/21/2015

1,000.00

Each

500.00

Line Total:

MS21047106

Nut Plate

1/21/2015

Yes

1/21/2015

120.00

Each

500.00

Line Total:

Note:

1/19/2015

303-  
SP1501-22



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID: PO27119

Purchase Order Date: 1/19/2015

PO Print Date: 1/19/2015

Page Number: 7 of 10

Order From: KLX INC.  
88289 EXPEDITE WAY

VU-KLX01

Ship To: DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

CHICAGO, IL 33172  
USA

Contact Name

Vendor Phone 305-925-2600

Ship To Contact

Ship To Phone

Ship Via: FedEx Overnight collect

Ship Acct:

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

USD

Destination-Collect

NAS21075-06	Nutplate	1/21/2015	10.00	81.1
		Yes	Each	
		1/21/2015		

Line Total:

NAS1149C0332R	WASHER	1/21/2015	2,000.00	50.0
		Yes	Each	
		1/21/2015		

Line Total:

NAS1149D0663J	Washer	1/21/2015 FN	1.00	50.0
		Yes	Each	
		1/21/2015		

Line Total:

NAS1149F0432P	WASHER	1/21/2015 FN	800.00	50.0
		Yes	Each	
		1/21/2015		

Note:

SP15-01-22

1/19/2015



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO27119

Purchase Order Date 1/19/2015

PO Print Date 1/19/2015

Page Number 8 of 10

Order From :  
KLX INC.  
88289 EXPEDITE WAY

VU-KLX01

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

CHICAGO, IL 33172  
USA

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	305-925-2600	Customer POID	
		Customer Tax #	10127-2607
Ship To Contact		Terms	Net 30
Ship To Phone		Currency	USD
Ship Via:	FedEx Overnight collect	FOB	Destination-Collect
Ship Acct:			

Line Total:

NAS1611-010

O-RING

1/21/2015

Yes

1/21/2015

200.00  
Each

Line Total:

NAS391B6P

Washer

1/21/2015

Yes

1/21/2015

150.00  
Each

Line Total:

NAS388-6-8P

SCREW

1/21/2015

Yes

1/21/2015

100.00  
Each

Line Total:

Note:

1/19/2015

SP15-01-22



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## PURCHASE ORDER

Purchase Order ID PO27119

Purchase Order Date 1/19/2015

PO Print Date 1/19/2015

Page Number 9 of 10

Order From :  
KLX INC.  
88289 EXPEDITE WAY

VU-KLX01

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

CHICAGO, IL 33172  
USA

Contact Name  
Vendor Phone 305-925-2600  
  
Ship To Contact  
Ship To Phone  
Ship Via: FedEx Overnight collect  
Ship Acct:

Buyer  
Customer POID  
Customer Tax # 10127-2607  
Terms Net 30  
Currency USD  
FOB Destination-Collect

Chantal Lavoie

OS200-M44S	CLAMP	1/21/2015	30.00	✓
		Yes	Each	
		1/21/2015		

Line Total:

PISC35-38A	Dzus 1/4 Turn Fastener	1/21/2015	150.00	✓
		Yes	Each	
		1/21/2015		

Line Total:

1400-90	MS20470A5-4	1/21/2015	50.00	✓
		Yes	Each	
		1/21/2015		

Line Total:

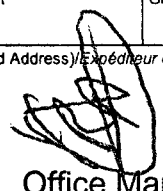
Deliver To: DAVID.BAIN

MS21209F7-15	Heli-Coil, Locking	1/21/2015 FN	100.00	✓
		Yes	Each	
		1/21/2015		

Note:

SP15-01-22

1/19/2015

1. Vendor (Name and Address)/Vendeur (Nom et adresse)  <b>KLX Inc.</b> <b>P.O. Box 025263</b> <b>Miami, FL 33102-5263</b>		2. Date of Direct Shipment to Canada/Date d'expédition directe vers la Canada  <b>01/20/2015</b>  3. Other References (Include Purchaser's Order No.) <i>Autres références (inclure le n° de commande de l'acheteur)</i> <b>PO#: Multiple -- See Item 12</b>		
4. Consignee (Name and Address)/Destinataire (Nom et adresse)  <b>DART AEROSPACE LTD</b> <b>1270 ABERDEEN ST</b> <b>HAWKESBURY, ON</b> <b>CANADA K6A 1K7</b>		5. Purchaser's Name and Address (If other than Consignee) <i>Nom et adresse de l'acheteur (S'il diffère du destinataire)</i> <b>DART AEROSPACE LTD</b> <b>1270 ABERDEEN ST</b> <b>HAWKESBURY, ON</b> <b>CANADA K6A 1K7</b>  6. Country of Transshipment/Pays de transbordement <b>CANADA</b>		
8. Transportation: Give Mode and Place of Direct Shipment to Canada <i>Transport: Préciser mode et point d'expédition directe vers le Canada</i>  <b>FEDX INTL P1 COLL</b>		7. Country of Origin of Goods <i>Pays d'origine des marchandises</i> <b>USA</b>  IF SHIPMENT INCLUDES GOODS OF DIFFERENT ORIGINS ENTER ORIGINS AGAINST ITEMS IN 12 <i>SI L'EXPÉDITION COMPREND DES MARCHANDISES D'ORIGINES DIFFÉRENTES, PRÉCISER LEUR PROVENANCE EN 12</i>  9. Conditions of Sales and Terms of Payment <i>(i.e. Sale, Consignment Shipment, Leased Goods, etc.)</i> <i>Conditions de vente et modalités de paiement</i> <i>(p. ex. vente, expédition en consignation, location de marchandises, etc.)</i> <b>NET 45</b>  10. Currency of Settlement/Devises du paiement <b>U.S. Currency</b>		
11. No. of Pkgs <i>Nbre de colis</i>	12. Specification of Commodities (Kind of Packages, Marks and Numbers, General Description and Characteristics, i.e. Grade, Quality) <i>Désignation des articles (Nature des colis, marques et numéros, description générale et caractéristiques, p. ex. classe, qualité)</i>	13. Quantity (State Unit) <i>Quantité (Préciser l'unité)</i>	14. Unit Price <i>Prix unitaire</i>	15. Total
1	PO#: PO27119 MS20257-3-7200  Invoice#: HY1MNT HINGE	10	11.370 /EA	113.70
1	PO#: PO27096 AN4-7A  Invoice#: HY1MNP BOLT	100	0.170 /EA	17.00
	PO#: PO27119 CR3213-5-03 MS21042L4 MS21042L5 MS21043-3  Invoice#: HY1MNT CR MAX RIVET NUT, SELF-LOCKING LOCKNUT NUT, SELF-LOCKING	200 1200 500 1000	0.400 /EA 0.160 /EA 0.450 /EA 0.380 /EA	80.00 192.00 225.00 380.00
<b>U.S. Currency</b>				
18. If any of fields 1 to 17 are included on an attached commercial invoice, check this box. <i>Si les renseignements des zones 1 à 17 figurent sur la facture commerciale, cocher cette boîte.</i>  <input checked="" type="checkbox"/> Commercial Invoice No./N° de la facture commerciale _____		16. Total Weight/Poids Total Net _____ Gross/Brut <b>41 lb 0 oz</b>		17. Invoice Total <i>Total de la facture</i> <b>3,112.55</b>
19. Exporter's Name and Address (if other than Vendor) <i>Nom et adresse de l'exportateur (S'il diffère du vendeur)</i>  <b>KLX Inc.</b> <b>10000 NW 15 TERRACE</b> <b>MIAMI, FL 33172</b>		20. Originator (Name and Address)/Expéditeur d'origine (Nom et adresse)   <b>Office Manager</b>		
21. Departmental Ruling (if applicable)/Décision du Ministère (S'il y a lieu)		22. If fields 23 to 25 are not applicable, check this box <i>Si les zones 23 à 25 sont sans objet, cocher cette boîte</i>  <input checked="" type="checkbox"/>		
23. If included in field 17 indicate amount: <i>Si compris dans le total à la zone 17, préciser:</i>  (i) Transportation charges, expenses and insurance from the place of direct shipment to Canada <i>Les frais de transport, dépenses et assurances à partir du point d'expédition directe vers le Canada</i> \$ _____  (ii) Costs for construction, erection and assembly incurred after importation into Canada <i>Les coûts de construction, d'érection et d'assemblage après importation au Canada</i> \$ _____  (iii) Export packing <i>Le coût de l'emballage d'exportation</i> \$ _____		24. If not included in field 17 indicate amount: <i>Si non compris dans le total à la zone 17, préciser:</i>  (i) Transportation charges, expenses and insurance to the place of direct shipment to Canada <i>Les frais de transport, dépenses et assurances jusqu'au point d'expédition directe vers le Canada</i> \$ _____  (ii) Amounts for commissions other than buying commissions <i>Les commissions autres que celles versées pour l'achat</i> \$ _____  (iii) Export packing <i>Le coût de l'emballage d'exportation</i> \$ _____		25. Check (if applicable) <i>Cocher (S'il y a lieu):</i>  (i) Royalty payments or subsequent proceeds are paid or payable by the purchaser <i>De redevances ou produits ont été ou seront versés par l'acheteur</i> <input type="checkbox"/>  (ii) The purchaser has supplied goods or services for use in the production of these goods <i>L'acheteur a fourni des marchandises ou des services pour la production des marchandises</i> <input type="checkbox"/>

CONTINUATION SHEET  
FEUILLE SUPPLÉMENTAIREPage  
2 of 2

1. Vendor (Name only)/Vendeur (Nom seulement)

KLX Inc.

3. Consignee (Name only)/Destinataire (Nom seulement)

DART AEROSPACE LTD

4. Purchaser if other than Consignee and/or Importer (Name only)

Acheteur, s'il diffère du destinataire et (ou) de l'importateur (Nom seulement)

DART AEROSPACE LTD

2. Other References (Include Purchaser's Order No.)

Autres références (inclure le n° de commande de l'acheteur)

PO#: Multiple -- See Item 6

5. No. of Pkgs Nbre de colis	6. Specification of Commodities (Kind of Packages, Marks and Numbers, General Description and Characteristics, i.e. Grade, Quality) Désignation des articles (Nature des colis, marques et numéros, description générale et caractéristiques, p. ex. classe, qualité)	13. Quantity (State Unit) Quantité (Préciser l'unité)	Selling Price/Prix de vente	
			14. Unit Price Prix unitaire	15. Total
1	PO#: PO27119 Invoice#: HY1MNT NAS1149C0332R WASHER, FLAT NAS1149F0432P WASHER, FLAT	2000 800	0.020 /EA 0.030 /EA	40.00 24.00
	PO#: PO27119 Invoice#: HY1MNS D5-PFSC35-38A-HF DZUS FASTENER	150	2.060 /EA	309.00
	PO#: PO27119 Invoice#: HY1MNT CCR264SS-3-02 CHERRY PULL-THRU RIV	200	0.100 /EA	20.00
	CR3213-4-04 CR MAX RIVET	100	0.350 /EA	35.00
	CR3213-4-05 CR MAX RIVET	100	0.370 /EA	37.00
	CR3213-4-01 CR MAX RIVET	100	0.390 /EA	39.00
	CR3213-4-02 CR MAX RIVET	500	0.320 /EA	160.00
	CR3213-4-03 CR MAX RIVET	200	0.360 /EA	72.00
	CR3242-4-02 CR MAX RIVET	200	0.370 /EA	74.00
	MS17984C413 QUICK RELEASE PIN	12	18.000 /EA	216.00
	MS20600AD4W5 RIVET, BLIND	300	0.180 /EA	54.00
	MS20601AD4W3 RIVET, BLIND	300	0.190 /EA	57.00
	MS20615-4M20 RIVET, SOLID	50	0.400 /EA	20.00
	MS20615-3M3 RIVET, SOLID	200	0.080 /EA	16.00
	MS21047L06 LOCKNUT, PLATE - TWO	120	0.300 /EA	36.00
	MS21075-06 LOCKNUT, PLATE - TWO	10	1.500 /EA	15.00
	NAS1149D0663J WASHER, FLAT	1	0.050 /EA	0.05
	NAS391B6P WASHER	150	0.190 /EA	28.50
	NAS388-6-8P SCREW	100	4.950 /EA	495.00
	QS200M44S CLAMP	30	1.750 /EA	52.50
	MS20470A5-4 RIVET, SOLID	50	0.300 /EA	15.00
	MS21209F7-15 INSERT	100	0.520 /EA	52.00
	PO#: PO27119 Invoice#: HY1MNS MS20819-12J SLEEVE	10	4.780 /EA	47.80
	PO#: PO27119 Invoice#: HY1MNR CR3523-4-02 CR MAX RIVET	200	0.950 /EA	190.00

U.S. Currency





Tel: +1.305.925.2600 • Fax: +1.305.507.7191 • www.KLXAerospace.com

Remit to Address: 88289 Expedite Way, Chicago, IL 60695-0001

Wire Instructions: KLX Inc. • JPMorgan Chase Bank New York

ABA: 021000021 • Account: 304639273 • SWIFT: CHASUS33 • CHIP UID: 0002

INVOICE NUMBER

HY1MNT

PAGE 1

SEND TO ACCOUNTING

SOLD TO:

002409  
DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7



SHIP TO:

DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7

ORDER NO.		DATE	SHIP VIA	TERMS		SHIPPING TERMS	
PO27119		01/20/15	FEDX INTL P1 COLL	NET 45		FOB-MIAMI	
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION	PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
1	200	CCR264SS-3-02 Description CHERRY PULL-THRU RIVET MFR: CHERRY AEROSPACE SANTA AN CTRL#: 2011A08212 LOT#: 87427443 LOT QTY: 200 Country of Origin USA	0.100	EA	0	200	20.00
2	100	CR3213-4-04 Description CR MAX RIVET MFR: CHERRY AEROSPACE SANTA AN CTRL#: 2012A15978 LOT#: 87579512 LOT QTY: 100 Country of Origin USA	0.350	EA	0	100	35.00
3	100	CR3213-4-05 Description CR MAX RIVET MFR: CHERRY AEROSPACE SANTA AN CTRL#: 2012D09689 LOT#: 87603738 LOT QTY: 100 Country of Origin USA	0.370	EA	0	100	37.00
4	100	CR3213-4-01 Description CR MAX RIVET MFR: CHERRY AEROSPACE SANTA AN CTRL#: 2006I10177 LOT#: 86642882 LOT QTY: 100 Country of Origin USA	0.390	EA	0	100	39.00
5	500	CR3213-4-02 Description CR MAX RIVET	0.320	EA	0	500	160.00
MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY KLX INC.							

ALL ITEMS ARE SUBJECT TO A 100% RESTOCKING CHARGE.

SHIPPED FROM: 10000 NW 15 TERRACE, MIAMI, FL 33172

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Remit to Address: 88289 Expedite Way, Chicago, IL 60695-0001

Wire Instructions: KLX Inc. • JPMorgan Chase Bank New York

ABA: 021000021 • Account: 304639273 • SWIFT: CHASUS33 • CHIP UID: 0002

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CANADA K6A 1K7



SHIP TO:

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CANADA K6A 1K7

ORDER NO.		DATE	SHIP VIA		TERMS		SHIPPING TERMS	
PO27119		01/20/15	FEDX INTL P1 COLL		NET 45		FOB-MIAMI	
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION		PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
6	200	MFR: CHERRY AEROSPACE SANTA AN CTRL#: 2014J18436 LOT#: 87999211 LOT QTY: 500 Country of Origin USA CR3213-4-03 Description CR MAX RIVET		0.360	EA	0	200	72.00
7	200	MFR: CHERRY AEROSPACE SANTA AN CTRL#: 2011H22099 LOT#: 87484144 LOT QTY: 200 Country of Origin USA CR3213-5-03 Description CR MAX RIVET		0.400	EA	0	200	80.00
8	200	MFR: CHERRY AEROSPACE SANTA AN CTRL#: 2011I08122 LOT#: 87536267 LOT QTY: 200 Country of Origin USA CR3242-4-02 Description CR MAX RIVET		0.370	EA	0	200	74.00
10	12	MFR: CHERRY AEROSPACE SANTA AN CTRL#: 2008K11817 LOT#: 87107710 LOT QTY: 200 Country of Origin USA MS17984C413 Description QUICK RELEASE PIN ECCN :9A991 MFR: AVIBANK MFG.		18.000	EA	0	12	216.00

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# KLX

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ORDER NO.		DATE	SHIP VIA	TERMS	SHIPPING TERMS		
PO27119		01/20/15	FEDX INTL P1 COLL	NET 45	FOB-MIAMI		
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION	PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
11	10	CTRL#: 2014G05206 LOT#: 1438754 LOT QTY: 12 Country of Origin USA MS20257-3-7200 Description HINGE ECCN :9A991 MFR: LA DEAU MFG CTRL#: 2014B02196 LOT#: 76419 LOT QTY: 10 Country of Origin USA	11.370	EA	0	10	113.70
12	300	MS20600AD4W5 Description RIVET, BLIND ECCN :9A991 MFR: CHERRY AEROSPACE SANTA AN CTRL#: 2014H14776 LOT#: 87961961 LOT QTY: 300 Country of Origin USA	0.180	EA	0	300	54.00
13	300	MS20601AD4W3 Description RIVET, BLIND ECCN :9A991 MFR: CHERRY AEROSPACE SANTA AN CTRL#: 2014I25083 LOT#: 87971281 LOT QTY: 300 Country of Origin USA	0.190	EA	0	300	57.00
14	50	MS20615-4M20 Description RIVET, SOLID	0.400	EA	0	50	20.00
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ORDER NO.		DATE	SHIP VIA	TERMS	SHIPPING TERMS		
PO27119		01/20/15	FEDX INTL P1 COLL	NET 45	FOB-MIAMI		
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION	PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
15	200	ECCN :9A991 MFR: AHG ATELIERS HAUTE-GARONN CTRL#: 2012F11039 LOT#: 260620 P01 F002 LOT QTY: 50 Country of Origin FRANCE MS20615-3M3 Description RIVET, SOLID ECCN :9A991 MFR: ALLFAST FASTENING CTRL#: 2014G04728 LOT#: S140515001C LOT QTY: 200 Country of Origin USA	0.080	EA	0	200	16.00
17	1200	MS21042L4 Description NUT, SELF-LOCKING ECCN :9A991 MFR: MACLEAN-ESNA CTRL#: 2014K01200 LOT#: 45781-000 LOT QTY: 1200 Country of Origin USA	0.160	EA	0	1200	192.00
18	500	MS21042L5 Description LOCKNUT ECCN :9A991 MFR: ALCOA FASTENING/REPUBLIC CTRL#: 2014I12280 LOT#: 51693 LOT QTY: 500 Country of Origin MEXICO	0.450	EA	0	500	225.00
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HAWKESBURY, ON  
CANADA K6A 1K7

ORDER NO.	DATE	SHIP VIA	TERMS	SHIPPING TERMS			
PO27119	01/20/15	FEDX INTL P1 COLL	NET 45	FOB-MIAMI			
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION	PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
19	1000	MS21043-3 Description NUT, SELF-LOCKING ECCN :9A991.d MFR: ALCOA KAYNAR FULLERTON CTRL#: 2013H23569 LOT#: M021200-000 LOT QTY: 1000 Country of Origin USA	0.380	EA	0	1000	380.00
20	120	MS21047L06 Description LOCKNUT, PLATE - TWO LUG ECCN :9A991 MFR: ALCOA FASTENING/REPUBLIC CTRL#: 2010B06145 LOT#: UC125 LOT QTY: 120 Country of Origin USA	0.300	EA	0	120	36.00
21	10	MS21075-06 Description LOCKNUT, PLATE - TWO LUG MFR: PAOLO ASTORI CTRL#: 2014H14779 LOT#: 58401 LOT QTY: 10 Country of Origin ITALY	1.500	EA	0	10	15.00
22	2000	NAS1149C0332R Description WASHER, FLAT ECCN :9A991 MFR: SUPERIOR WASHER AND GASKE CTRL#: 2013I17548 LOT#: C134126-02-1 LOT QTY: 2000	0.020	EA	0	2000	40.00

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HAWKESBURY, ON  
CANADA K6A 1K7

ORDER NO.		DATE	SHIP VIA		TERMS		SHIPPING TERMS	
PO27119		01/20/15	FEDX INTL P1 COLL		NET 45		FOB-MIAMI	
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION		PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
23	1	Country of Origin USA NAS1149D0663J Description WASHER, FLAT ECCN :9A991 MFR: ANILLO INDUSTRIES CTRL#: 2014B24992 LOT#: X6816 LOT QTY: 1		0.050	EA	0	1	0.05
24	800	Country of Origin USA NAS1149F0432P Description WASHER, FLAT ECCN :9A991 MFR: ANILLO INDUSTRIES CTRL#: 2014G13621 LOT#: Y1527 LOT QTY: 800		0.030	EA	0	800	24.00
26	150	Country of Origin USA NAS391B6P Description WASHER MFR: ANILLO INDUSTRIES CTRL#: 2014E05951 LOT#: X7228 LOT QTY: 150		0.190	EA	0	150	28.50
27	100	Country of Origin USA NAS388-6-8P Description SCREW ECCN :9A991 MFR: PILGRIM SCREW (RI) CTRL#: 2015A04074 LOT#: R35415		4.950	EA	0	100	495.00

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ORDER NO.		DATE	SHIP VIA	TERMS		SHIPPING TERMS	
PO27119		01/20/15	FEDX INTL P1 COLL	NET 45		FOB-MIAMI	
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION	PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
28	30	LOT QTY: 100 Country of Origin USA QS200M44S Description CLAMP ECCN :9A991 MFR: BREEZE CLAMPS CTRL#: 2012I07551 LOT#: 082812 LOT QTY: 30 Country of Origin USA	1.750	EA	0	30	52.50
30	50	MS20470A5-4 Description RIVET, SOLID ECCN :9A991 MFR: AHG ATELIERS HAUTE-GARONN CTRL#: 2012D19904 LOT#: 253018 P002 F001 LOT QTY: 50 Country of Origin FRANCE **REF: 71400-90	0.300	EA	0	50	15.00
32	100	MS21209F7-15 Description INSERT ECCN :9A991 MFR: EMHART TEKNOLOGIES LLC DA CTRL#: 2014D16320 LOT#: 786832 LOT QTY: 100 Country of Origin USA  <i>These commodities, technology or software were exported from the United States in accordance</i>	0.520	EA	0	100	52.00
MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY KLX INC.							

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ORDER NO. PO27119		DATE 01/20/15	SHIP VIA FEDX INTL P1 COLL		TERMS NET 45		SHIPPING TERMS FOB-MIAMI		
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION			PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
		with the Export Administration Regulations. Diversion contrary to U.S. law is prohibited.							
		*** SHIPPED 2 CTNS, 1 TUBE ***							
		# 1=TBE 10# 0 OZ. 629573532552							
		# 2=CTN 17# 0 OZ. 629573532563							
		# 3=CTN 14# 0 OZ. 629573532574							
		FREIGHT ACCT# 15179324-0							
INVOICE#.....: HY1MNT 									
ORDER#.....: 9H77J1 									
CONSOLIDATE#..: 1B6X3E 									
								SUBTOTAL :	2,548.75
								HANDLING :	0.00
								DISC/ALL :	0.00
								INCM FRT :	0.00
								FREIGHT :	0.00
								TOTAL :	2,548.75
								U.S. CURRENCY	
gxd	9H77J1	SHIPPED ON 01/20/15							
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HAWKESBURY, ON  
CANADA K6A 1K7

ORDER NO.		DATE	SHIP VIA	TERMS		SHIPPING TERMS	
PO27119		01/20/15	FEDX INTL P1 COLL	NET 45		FOB-MIAMI	
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION	PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
16	10	MS20819-12J Description SLEEVE ECCN : 9A991 MFR: DESIGNED METAL DBA PERMAS CTRL#: 2014I09828 LOT#: F00033260-37076 LOT QTY: 10 Country of Origin USA	4.780	EA	0	10	47.80
29	150	D5-PFSC35-38A-HF Description DZUS FASTENER MFR: SOUTHCO CONCORDVILLE (PA) CTRL#: 2015A09815 LOT#: 0001270591 LOT QTY: 150 Country of Origin USA **REF: PFSC35-38A  These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to U.S. law is prohibited.	2.060	EA	0	150	309.00

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PAGE 2




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DART AEROSPACE LTD  
1270 ABERDEEN ST  
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SHIP TO:

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1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7

ORDER NO.		DATE	SHIP VIA	TERMS	SHIPPING TERMS			
PO27119		01/20/15	FEDX INTL P1 COLL	NET 45	FOB-MIAMI			
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION		PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
		FREIGHT ACCT# 15179324-0						
INVOICE#.....:		HY1MNS						
ORDER#.....:		9H79P8						
CONSOLIDATE#..:		1B6X3E						
							SUBTOTAL :	356.80
							HANDLING :	0.00
							DISC/ALL :	0.00
							INCM FRT :	0.00
							FREIGHT :	0.00
							TOTAL :	356.80USD
							U.S. CURRENCY	
gxd	9H79P8	SHIPPED ON 01/20/15						
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CANADA K6A 1K7



SHIP TO:

DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7

ORDER NO. PO27119		DATE 01/20/15	SHIP VIA FEDX INTL P1 COLL		TERMS NET 45		SHIPPING TERMS FOB-MIAMI		
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION			PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
9	200	CR3523-4-02 Description CR MAX RIVET MFR: CHERRY AEROSPACE SANTA AN CTRL#: 2007J03805 LOT#: 86895587 LOT QTY: 200 Country of Origin USA  These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to U.S. law is prohibited.  FREIGHT ACCT# 15179324-0			0.950	EA	0	200	190.00
INVOICE#.....:		HY1MNR							
ORDER#.....:		9H79L8							
CONSOLIDATE#..:		1B6X3E							
							SUBTOTAL :	190.00	
							HANDLING :	0.00	
							DISC/ALL :	0.00	
							INCM FRT :	0.00	
							FREIGHT :	0.00	
							TOTAL :	190.00USD	
							U.S. CURRENCY		
gxd	9H79L8	SHIPPED ON 01/20/15							
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DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
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SHIP TO:

DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7



ORDER NO.		DATE	SHIP VIA	TERMS		SHIPPING TERMS	
PO27119		01/20/15	FEDX INTL P1 COLL	NET 45		FOB-MIAMI	
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION	PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
1	200	CCR264SS-3-02 CHERRY PULL-THRU RIVET Country Origin: USA TARIFF: 7318.23.0000 MFR: CHERRY AEROSPACE SANTA AN CTRL# : 2011A08212 LOT# : 87427443 LOT QTY: 200 COUNTRY OF ORIGIN: USA Country of Origin: USA	0.100	EA	0	200	20.00
2	100	CR3213-4-04 CR MAX RIVET Country Origin: USA TARIFF: 7616.10.3000 MFR: CHERRY AEROSPACE SANTA AN CTRL# : 2012A15978 LOT# : 87579512 LOT QTY: 100 COUNTRY OF ORIGIN: USA Country of Origin: USA	0.350	EA	0	100	35.00
3	100	CR3213-4-05 CR MAX RIVET Country Origin: USA TARIFF: 7616.10.3000 MFR: CHERRY AEROSPACE SANTA AN CTRL# : 2012D09689 LOT# : 87603738 LOT QTY: 100 COUNTRY OF ORIGIN: USA Country of Origin: USA	0.370	EA	0	100	37.00
4	100	CR3213-4-01	0.390	EA	0	100	39.00
***CONTINUED***							
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 1270 ABERDEEN ST  
 HAWKESBURY, ON  
 CANADA K6A 1K7



ORDER NO.		DATE	SHIP VIA	TERMS		SHIPPING TERMS	
PO27119		01/20/15	FEDX INTL P1 COLL	NET 45		FOB-MIAMI	
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION	PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
5	500	CR MAX RIVET Country Origin: USA TARIFF: 7616.10.3000 MFR: CHERRY AEROSPACE SANTA AN CTRL# : 2006I10177 LOT# : 86642882 LOT QTY: 100 COUNTRY OF ORIGIN: USA Country of Origin: USA	0.320	EA	0	500	160.00
6	200	CR3213-4-02 CR MAX RIVET Country Origin: USA TARIFF: 7616.10.3000 MFR: CHERRY AEROSPACE SANTA AN CTRL# : 2014J18436 LOT# : 87999211 LOT QTY: 500 COUNTRY OF ORIGIN: USA Country of Origin: USA	0.360	EA	0	200	72.00
7	200	CR3213-4-03 CR MAX RIVET Country Origin: USA TARIFF: 7318.23.0000 MFR: CHERRY AEROSPACE SANTA AN CTRL# : 2011H22099 LOT# : 87484144 LOT QTY: 200 COUNTRY OF ORIGIN: USA Country of Origin: USA	0.400	EA	0	200	80.00
***CONTINUED***							
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HAWKESBURY, ON  
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SHIP TO:

DART AEROSPACE LTD  
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HAWKESBURY, ON  
CANADA K6A 1K7



ORDER NO.		DATE	SHIP VIA	TERMS		SHIPPING TERMS	
PO27119		01/20/15	FEDX INTL P1 COLL	NET 45		FOB-MIAMI	
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION	PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
8	200	Country Origin: USA TARIFF: 7616.10.3000 MFR: CHERRY AEROSPACE SANTA AN CTRL# : 2011I08122 LOT# : 87536267 LOT QTY: 200 COUNTRY OF ORIGIN: USA Country of Origin: USA CR3242-4-02	0.370	EA	0	200	74.00
10	12	CR MAX RIVET Country Origin: USA TARIFF: 7616.10.3000 MFR: CHERRY AEROSPACE SANTA AN CTRL# : 2008K11817 LOT# : 87107710 LOT QTY: 200 COUNTRY OF ORIGIN: USA Country of Origin: USA MS17984C413	18.000	EA	0	12	216.00
11	10	QUICK RELEASE PIN ECCN :9A991 Country Origin: USA TARIFF: 7318.16.0060 MFR: AVIBANK MFG. CTRL# : 2014G05206 LOT# : 1438754 LOT QTY: 12 COUNTRY OF ORIGIN: USA Country of Origin: USA MS20257-3-7200 HINGE	11.370	EA	0	10	113.70
***CONTINUED***							
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HAWKESBURY, ON  
CANADA K6A 1K7

SHIP TO:

DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7



ORDER NO. PO27119		DATE 01/20/15	SHIP VIA FEDX INTL P1 COLL		TERMS NET 45		SHIPPING TERMS FOB-MIAMI		
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION			PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
12	300	ECCN :9A991 Country Origin: USA TARIFF: 7609.00.0000 MFR: LA DEAU MFG CTRL# : 2014B02196 LOT# : 76419 LOT QTY: 10 COUNTRY OF ORIGIN: USA Country of Origin: USA MS20600AD4W5 RIVET, BLIND ECCN :9A991 Country Origin: USA TARIFF: 7616.10.3000 MFR: CHERRY AEROSPACE SANTA AN CTRL# : 2014H14776 LOT# : 87961961 LOT QTY: 300 COUNTRY OF ORIGIN: USA Country of Origin: USA			0.180	EA	0	300	54.00
13	300	MS20601AD4W3 RIVET, BLIND ECCN :9A991 Country Origin: USA TARIFF: 7616.10.3000 MFR: CHERRY AEROSPACE SANTA AN CTRL# : 2014I25083 LOT# : 87971281 LOT QTY: 300 COUNTRY OF ORIGIN: USA Country of Origin: USA			0.190	EA	0	300	57.00
***CONTINUED***									
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HAWKESBURY, ON  
CANADA K6A 1K7



ORDER NO.		DATE	SHIP VIA	TERMS		SHIPPING TERMS	
PO27119		01/20/15	FEDX INTL P1 COLL	NET 45		FOB-MIAMI	
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION	PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
14	50	MS20615-4M20 RIVET, SOLID ECCN :9A991 Country Origin: FRANCE TARIFF: 7508.90.5000 MFR: AHG ATELIERS HAUTE-GARONN CTRL# : 2012F11039 LOT# : 260620 P01 F002 LOT QTY: 50 COUNTRY OF ORIGIN: FR Country of Origin: FRANCE	0.400	EA	0	50	20.00
15	200	MS20615-3M3 RIVET, SOLID ECCN :9A991 Country Origin: USA TARIFF: 7508.90.5000 MFR: ALLFAST FASTENING CTRL# : 2014G04728 LOT# : S140515001C LOT QTY: 200 COUNTRY OF ORIGIN: USA Country of Origin: USA	0.080	EA	0	200	16.00
17	1200	MS21042L4 NUT, SELF-LOCKING ECCN :9A991 Country Origin: USA TARIFF: 7318.16.0085 MFR: MACLEAN-ESNA CTRL# : 2014K01200 LOT# : 45781-000 LOT QTY: 1200	0.160	EA	0	1200	192.00
***CONTINUED***							
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ORDER NO.		DATE	SHIP VIA	TERMS		SHIPPING TERMS	
PO27119		01/20/15	FEDX INTL P1 COLL	NET 45		FOB-MIAMI	
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION	PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
18	500	COUNTRY OF ORIGIN: USA Country of Origin: USA MS21042L5 LOCKNUT ECCN :9A991 Country Origin: MEXICO TARIFF: 7318.16.0085 MFR: ALCOA FASTENING/REPUBLIC CTRL# : 2014I12280 LOT# : 51693 LOT QTY: 500	0.450	EA	0	500	225.00
19	1000	COUNTRY OF ORIGIN: MX Country of Origin: MEXICO MS21043-3 NUT, SELF-LOCKING ECCN :9A991.d Country Origin: USA TARIFF: 7318.16.0085 MFR: ALCOA KAYNAR FULLERTON CTRL# : 2013H23569 LOT# : M021200-000 LOT QTY: 1000	0.380	EA	0	1000	380.00
20	120	COUNTRY OF ORIGIN: USA Country of Origin: USA MS21047L06 LOCKNUT, PLATE - TWO LUG ECCN :9A991 Country Origin: USA TARIFF: 7318.16.0030 MFR: ALCOA FASTENING/REPUBLIC CTRL# : 2010B06145	0.300	EA	0	120	36.00
***CONTINUED***							
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1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7

SHIP TO:

DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7



ORDER NO.		DATE	SHIP VIA	TERMS	SHIPPING TERMS		
PO27119		01/20/15	FEDX INTL P1 COLL	NET 45	FOB-MIAMI		
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION	PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
21	10	LOT# : UC125 LOT QTY: 120 COUNTRY OF ORIGIN: USA Country of Origin: USA MS21075-06 LOCKNUT, PLATE - TWO LUG Country Origin: ITALY TARIFF: 7318.16.0085 MFR: PAOLO ASTORI CTRL# : 2014H14779 LOT# : 58401 LOT QTY: 10 COUNTRY OF ORIGIN: IT Country of Origin: ITALY	1.500	EA	0	10	15.00
22	2000	NAS1149C0332R WASHER, FLAT ECCN :9A991 Country Origin: USA TARIFF: 7318.22.0000 MFR: SUPERIOR WASHER AND GASKE CTRL# : 2013I17548 LOT# : C134126-02-1 LOT QTY: 2000 COUNTRY OF ORIGIN: USA Country of Origin: USA	0.020	EA	0	2000	40.00
23	1	NAS1149D0663J WASHER, FLAT ECCN :9A991 Country Origin: USA TARIFF: 7616.10.9090 MFR: ANILLO INDUSTRIES	0.050	EA	0	1	0.05
***CONTINUED***							
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Remit to Address: 88289 Expedite Way, Chicago, IL 60695-0001  
Wire Instructions: KLX Inc. • JPMorgan Chase Bank New York  
ABA: 021000021 • Account: 304639273 • SWIFT: CHASUS33 • CHIP UID: 0002

INVOICE NUMBER

HY1MNT

PAGE 8 OF 10

SEND TO ACCOUNTING

SOLD TO:  
002409

DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7

SHIP TO:

DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7



ORDER NO.		DATE	SHIP VIA		TERMS		SHIPPING TERMS		
PO27119		01/20/15	FEDX INTL P1 COLL		NET 45		FOB-MIAMI		
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION			PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
24	800	CTRL# : 2014B24992 LOT# : X6816 LOT QTY: 1 COUNTRY OF ORIGIN: USA Country of Origin: USA NAS1149F0432P WASHER, FLAT ECCN :9A991 Country Origin: USA TARIFF: 7616.10.9090 MFR: ANILLO INDUSTRIES			0.030	EA	0	800	24.00
26	150	CTRL# : 2014G13621 LOT# : Y1527 LOT QTY: 800 COUNTRY OF ORIGIN: USA Country of Origin: USA NAS391B6P WASHER Country Origin: USA TARIFF: 7415.21.0000 MFR: ANILLO INDUSTRIES			0.190	EA	0	150	28.50
27	100	CTRL# : 2014E05951 LOT# : X7228 LOT QTY: 150 COUNTRY OF ORIGIN: USA Country of Origin: USA NAS388-6-8P SCREW ECCN :9A991 Country Origin: USA TARIFF: 7318.15.6080			4.950	EA	0	100	495.00
***CONTINUED***									
MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY KLX INC.									

ALL ITEMS ARE SUBJECT TO A 100% RESTOCKING CHARGE.

SHIPPED FROM: 10000 NW 15 TERRACE, MIAMI, FL 33172

### ORIGINAL INVOICE

BY RECEIVING DELIVERY OF THE ITEMS COVERED BY THIS INVOICE, BUYER AGREES TO THE TERMS AND CONDITIONS OF SALE AT:  
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PAGE 9 OF 10

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1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7



ORDER NO.		DATE	SHIP VIA	TERMS		SHIPPING TERMS		
PO27119		01/20/15	FEDX INTL P1 COLL	NET 45		FOB-MIAMI		
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION		PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
28	30	MFR: PILGRIM SCREW (RI) CTRL# : 2015A04074 LOT# : R35415 LOT QTY: 100 COUNTRY OF ORIGIN: USA Country of Origin: USA QS200M44S CLAMP ECCN :9A991 Country Origin: USA TARIFF: 7318.15.5030 MFR: BREEZE CLAMPS CTRL# : 2012I07551 LOT# : 082812 LOT QTY: 30 COUNTRY OF ORIGIN: USA Country of Origin: USA		1.750	EA	0	30	52.50
30	50	MS20470A5-4 RIVET, SOLID ECCN :9A991 Country Origin: FRANCE TARIFF: 7616.10.3000 MFR: AHG ATELIERS HAUTE-GARONN CTRL# : 2012D19904 LOT# : 253018 P002 F001 LOT QTY: 50 COUNTRY OF ORIGIN: FR Country of Origin: FRANCE **REF: 71400-90		0.300	EA	0	50	15.00
32	100	MS21209F7-15 INSERT		0.520	EA	0	100	52.00
***CONTINUED***								
MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY KLX INC.								

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SHIPPED FROM: 10000 NW 15 TERRACE, MIAMI, FL 33172

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PAGE 10 OF 10

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1270 ABERDEEN ST  
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CANADA K6A 1K7

SHIP TO:

DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7



ORDER NO.		DATE	SHIP VIA	TERMS	SHIPPING TERMS			
PO27119		01/20/15	FEDX INTL P1 COLL	NET 45	FOB-MIAMI			
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION		PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
		<p>ECCN :9A991 Country Origin: USA TARIFF: 7318.16.0060 MFR: EMHART TEKNOLOGIES LLC DA CTRL# : 2014D16320 LOT# : 786832 LOT QTY: 100 COUNTRY OF ORIGIN: USA Country of Origin: USA</p> <p><i>These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to U.S. law is prohibited.</i></p> <p>*** SHIPPED 2 CTNS, 1 TUBE *** # 1=TBE 10# 0 OZ. 629573532552 # 2=CTN 17# 0 OZ. 629573532563 # 3=CTN 14# 0 OZ. 629573532574 FREIGHT ACCT# 15179324-0</p>						
						SUBTOTAL :		2,548.75
						HANDLING :		0.00
						DISC/ALL :		0.00
						INCM FRT :		0.00
						FREIGHT :		0.00
						TOTAL :		2,548.75USD
								U.S. CURRENCY
MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY KLX INC.								

ALL ITEMS ARE SUBJECT TO A 100% RESTOCKING CHARGE.

SHIPPED FROM: 10000 NW 15 TERRACE, MIAMI, FL 33172



## ORIGINAL INVOICE

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Wire Instructions: KLX Inc. • JPMorgan Chase Bank New York  
ABA: 021000021 • Account: 304639273 • SWIFT: CHASUS33 • CHIP UID: 0002

INVOICE NUMBER

HY1MNR

SEND TO ACCOUNTING

PAGE 1 OF 1

SOLD TO:

002409

DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7

SHIP TO:

DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7



ORDER NO.		DATE	SHIP VIA	TERMS		SHIPPING TERMS		
PO27119		01/20/15	FEDX INTL P1 COLL	NET 45		FOB-MIAMI		
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION		PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
9	200	CR3523-4-02 CR MAX RIVET Country Origin: USA TARIFF: 7318.23.0000 MFR: CHERRY AEROSPACE SANTA AN CTRL# : 2007J03805 LOT# : 86895587 LOT QTY: 200 COUNTRY OF ORIGIN: USA Country of Origin: USA  <i>These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to U.S. law is prohibited.</i>  FREIGHT ACCT# 15179324-0		0.950	EA	0	200	190.00
						SUBTOTAL :		190.00
						HANDLING :		0.00
						DISC/ALL :		0.00
						INCM FRT :		0.00
						FREIGHT :		0.00
						TOTAL :		190.00USD
								U.S. CURRENCY
MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY KLX INC.								

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SHIPPED FROM: 10000 NW 15 TERRACE, MIAMI, FL 33172



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ABA: 021000021 • Account: 304639273 • SWIFT: CHASUS33 • CHIP UID: 0002



INVOICE NUMBER

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PAGE 1 OF 1



SOLD TO:

002409  
DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7

SHIP TO:

DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7

ORDER NO.		DATE	SHIP VIA	TERMS		SHIPPING TERMS		
PO27096		01/20/15	FEDX INTL P1 COLL	NET 45		FOB-MIAMI		
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION		PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
10	100	AN4-7A BOLT ECCN :9A991 Country Origin: USA TARIFF: 7318.15.8085 MFR: MAC FASTENERS CTRL# : 2013C19375 LOT# : 63210 LOT QTY: 100 COUNTRY OF ORIGIN: USA Country of Origin: USA  These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to U.S. law is prohibited.  FREIGHT ACCT# 15179324-0		0.170	EA	0	100	17.00
						SUBTOTAL :		17.00
						HANDLING :		0.00
						DISC/ALL :		0.00
						INCM FRT :		0.00
						FREIGHT :		0.00
						TOTAL :		17.00USD
								U.S. CURRENCY
MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY KLX INC.								

ALL ITEMS ARE SUBJECT TO A 100% RESTOCKING CHARGE.

SHIPPED FROM: 10000 NW 15 TERRACE, MIAMI, FL 33172



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INVOICE NUMBER

HY1MNS

PAGE 1 OF 2

SOLD TO:

002409  
 DART AEROSPACE LTD  
 1270 ABERDEEN ST  
 HAWKESBURY, ON  
 CANADA K6A 1K7

SHIP TO:

DART AEROSPACE LTD  
 1270 ABERDEEN ST  
 HAWKESBURY, ON  
 CANADA K6A 1K7



ORDER NO. PO27119		DATE 01/20/15	SHIP VIA FEDX INTL P1 COLL		TERMS NET 45		SHIPPING TERMS FOB-MIAMI	
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION		PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
16	10	MS20819-12J SLEEVE ECCN :9A991 Country Origin: USA TARIFF: 7307.22.1000 MFR: DESIGNED METAL DBA PERMAS CTRL# : 2014I09828 LOT# : F00033260-37076 LOT QTY: 10 COUNTRY OF ORIGIN: USA Country of Origin: USA		4.780	EA	0	10	47.80
29	150	D5-PFSC35-38A-HF DZUS FASTENER Country Origin: USA TARIFF: 7318.29.0000 MFR: SOUTHCO CONCORDVILLE (PA) CTRL# : 2015A09815 LOT# : 0001270591 LOT QTY: 150 COUNTRY OF ORIGIN: USA Country of Origin: USA **REF: PFSC35-38A  <i>These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to U.S. law is prohibited.</i>		2.060	EA	0	150	309.00
***CONTINUED***								
MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY KLX INC.								

MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY KLX INC.

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SHIPPED FROM: 10000 NW 15 TERRACE, MIAMI, FL 33172

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INVOICE NUMBER

HY1MNS

PAGE 2 OF 2

SOLD TO:

002409  
DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7

SHIP TO:

DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7



ORDER NO. PO27119		DATE 01/20/15	SHIP VIA FEDX INTL P1 COLL		TERMS NET 45		SHIPPING TERMS FOB-MIAMI		
ITEM NO.	QUANTITY ORDERED	PART NUMBER AND DESCRIPTION			PRICE	UNIT	BACK ORDER	SHIPPED	AMOUNT
	FREIGHT	ACCT# 15179324-0							
							SUBTOTAL :	356.80	
							HANDLING :	0.00	
							DISC/ALL :	0.00	
							INCM FRT :	0.00	
							FREIGHT :	0.00	
							TOTAL :	356.80USD	
							U.S. CURRENCY		
MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY KLX INC.									

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SHIPPED FROM: 10000 NW 15 TERRACE, MIAMI, FL 33172



## ORIGINAL INVOICE

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<http://www.KLXaerospace.com/conditions-sale/>



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

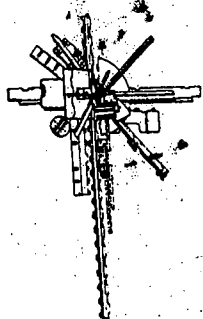
**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
11	10	EA	MS20257-3-7200		76419	LA DEAU MFG	06192		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15



# LaDeau

MANUFACTURING CORPORATION

CERTIFICATE OF CONFORMANCE

ISO 9001:2008 CERTIFIED  
TUV-USA Quality Systems

637 West Colorado Street, Glendale, California 91204  
Tel: 818-240-3990 Fax: 818-240-1219  
email: ladeaumfg@gmail.com

DATE

JAN 17, 2014

BILL TO

B/E AEROSPACE, INC.  
CONSUMABLES MANAGEMENT  
P.O. BOX 025263  
MIAMI FL 33102

CONSIGNEE TO AND DESTINATION

B/E AEROSPACE  
CONSUMABLES MANAGEMENT  
9835 NW 14TH ST  
MIAMI FL 33172

PURCHASE ORDER #

0TAH43

ROUTE

FEDEX/FREIGHT/COLL  
ACCN(018757)

QUANTITY

DESCRIPTION

1000

MS20257-3-7200  
REF: COMPLIES WITH DFAR  
252.225-7009  
CHEM & PHYS CERT  
REF: RELEASE HK3EYOTAH43

1

SHIPPER NO.:

A-42226

084850

**IMPORTANT:**

SHIPPER NOT RESPONSIBLE  
FOR DISCREPANCIES UNLESS  
REPORTED WITHIN  
15 DAYS OF RECEIPT

RECEIVED BY:

TOTAL >>

LOT #

76419, C 76420

01/17/14

*[Signature]*  
AUTHORIZED AGENT

MAKE-UP ☒

STOCK ☐  
FORM 4.10-1 7/09

LaDeau mfg. confirms that all materials furnished hereby are represented to conform to the drawing and/or specification detailed on the purchase. Test reports covering the material used in the manufacture of these items are on file and indicate conformance with applicable specification requirements. These reports are available for review.

*[Signature]* Q.A. Manager



1901 N. Narragansett Ave. • Chicago, Illinois 60639  
773/804.0404 • Fax 773/804.6408  
www.industeel.com  
An ISO 9001 Certified Company

03/28/13

ISW Order/Invoice Number: 147706-00

SOLD TO: L0590  
LA DEAU MFG. COMPANY  
637 W. COLORADO STREET

SHIP TO: L0590  
LA DEAU MFG. COMPANY  
637 W. COLORADO STREET

GLENDALÉ CA 91209

GLENDALÉ CA 91209

CUSTOMER PO: J24440

0880SSBT

.0880"302 STAINL SPEC DIA N/M CNT CLS

WEIGHT: 3125

HEAT NUMBER: FOM9

#### CHEMISTRIES

C	Mn	P	S	Si	Cr	Ni	N
.069	1.020	.034	.001	.370	18.150	8.020	.061
Mo	Cu						
.300	.420						

#### PHYSICAL PROPERTIES

TENSILE: 256933 256933

TORSIONS:

ROCKWELL #1:  
ROCKWELL #2:

BENDS:  
SALT SPRAY HOURS:  
COATING WEIGHT:  
GRAIN SIZE:

YIELD STRENGTH: 000000/000000  
ELONGATION:  
REDUCTION OF AREA:

\*\*\*\* MERCURY FREE \*\*\*\*

\*\*\* SPECIFICATIONS \*\*\*

ASTM A313-10

AMS 5688-L

SAE J230-94

**LaDeau**

MANUFACTURING CORPORATION

PO#:

P/N:

SHIPPER:

DATE:

LOT#:

TARIFF: 7223.00

NAFTA: B

MELT: US UNITED STATES

ORIG: US UNITED STATES

MILL: INDUSTRIAL ALLOYS

DFAR: Y

ROHS: Y

Rey Domingo, Quality Control Manager

The values and specifications herein are passed through from the manufacturer directly to the customer.  
Please see reverse side or www.industeel.com for all Terms and Conditions of Sale.  
Material Properties Sheet 70403-MPS Version 1 Approved by BF 11/20/12



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


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**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
32	100	EA	MS21209F7-15		786832	EMHART TEKNOLOGIES L	01556		

  
\_\_\_\_\_  
Jason Lewis  
Senior Director, Global Quality

01/20/15

## Certificate of Compliance

To: B/E Aerospace Consumables  
Mgmt.  
P.O. Box 025263  
Miami FL 33162-5263

Customer's Order No. 0SYW08  
Sales Order No. 537928 SO  
Shipping Date 04/08/14

**Non-transferable**

PART NUMBER	CONTROL NUMBER	I / A / W	QUANTITY
3591-7CN656 Country of Origin: US	713984 (W-5049871)	MS21209F7-15	131.000
3591-7CN656 Country of Origin: US	713984 (W-5049871)	MS21209F7-15	6.000
3591-7CN656 Country of Origin: US	786832 (W-5054121)	MS21209F7-15	14863.000

We, STANLEY Engineered Fastening certify that all items listed above and supplied on the above mentioned Purchase Order have been inspected and comply in every way with the relevant drawings and/or specifications in accordance with your requirements.

We further certify that all stainless steel inserts supplied on the above Purchase Order have been inspected and comply in all respects with the applicable drawings and with the chemical composition and physical property requirements of AS7245 Rev A and ASME SA-479. All testing & sampling plans apply per NASM8846 Rev. 1.

In addition, those stainless steel inserts covered by National Aerospace Standards MS21208, NASM21209 Rev 3, NASM122076 thru NASM122275 Rev 1, NASM124651 thru NASM124850 Rev 1, MS9018 Rev A and National Aerospace Specification NASM8846 Rev 1 are certified to conform thereof.

We also certify that all inconel inserts supplied on the above Purchase Order have been inspected and comply in all respects with the applicable drawing and with the chemical composition and physical property requirements of AS7246 Rev NEW. All testing & sampling plans apply per NASM8846 Rev. 1.

We further certify that Tangless® inserts are in conformance with NAS1130 Rev 5 and NA0276 Rev 3. Tangless is a registered trademark of Advanex, Inc. (JP) used under license.

Metric Heli-Coil® inserts are covered by the following Aerospace Standards MA3279 Rev B, MA3280 Rev B, MA3281 Rev B, MA3329 Rev C, MA3330 Rev C, MA3331 Rev C and MA1565 Rev A.

STANLEY Engineered Fastening maintains a single standard of quality and the Quality Assurance Program has been designed to comply with the requirements of ISO 9001:2008, AS9100:2009 Rev C, and TS16949:2009.

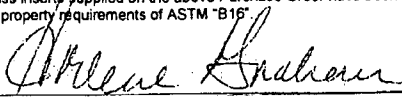
We further certify that the parts supplied are free from mercury contamination and that mercury in any form, including mercury thermometers, was not used in manufacture or testing of the parts.

DFARS 252.225-7009 applies to articles containing specialty metals. We further certify that any tools and kits with an NSN number and Heli-Coil wire inserts supplied on the above Purchase Order comply with the requirements of section 252.225-7015 of DFARS.

The Quality Assurance Program, inspection records, chemical composition and physical analysis reports and special process certification are available for your review at our plant in Danbury, Connecticut at any time during normal business hours.

We also certify that all brass inserts supplied on the above Purchase Order have been inspected and comply in all respects with the applicable drawing and with the chemical composition and physical property requirements of ASTM "B16".

Authorized Signature



Emhart Technologies LLC, a business division of  
Firm STANLEY Engineered Fastening

*A StanleyBlack&Decker, Inc. Company*

**This certificate of compliance is valid only when issued by STANLEY Engineered Fastening, 4 Shelter Rock Lane, Danbury, Connecticut 06810 or its authorized distributors. Any correspondence should reference the control number.**

PERTH, ON  
ERIN, ON  
DUMAS, AR  
LANCASTER, SC

613-267-3752 FAX 613-267-5617  
519-833-8632 FAX 519-833-2213  
870-382-2880 FAX 870-382-8988  
803-283-3353 FAX 803-283-8303



Drawing on Innovation  
CENTRAL WIRE INDUSTRIES

FOND DU LAC, WI  
UNION, IL  
PERRIS, CA

920-926-0609 FAX 920-926-0882  
815-823-2131 FAX 815-823-2128  
951-857-2105 FAX 951-943-8061

THE LEADING MANUFACTURER OF STAINLESS STEEL AND NICKEL ALLOY WIRE PRODUCTS  
EXECUTIVE OFFICES: PERTH, ON CANADA - EMAIL: [sales@centralwire.com](mailto:sales@centralwire.com)

CENTRAL WIRE INDUSTRIES LTD.  
1 NORTH STREET, PERTH, ONTARIO, CANADA K7H2S2  
TEL: 613-267-3752 1-888-267-3761  
FAX: 613-267-3829/2951 SALES FAX: 613-267-5617

## CERTIFICATE OF CONFORMANCE

SOLD  
TO

EMHART TEKNOLOGIES LLC  
P.O. BOX 50918  
INDIANAPOLIS  
IN 46250  
USA

SHIP  
TO

EMHART TEKNOLOGIES LLC  
SHELTER ROCK LANE  
DANBURY  
CT 06810  
USA

CUSTOMER'S PO NO.	TYPE OF CERT	CUSTOMER	ORDER NO.	WORK ORDER	DATE SHIPPED
841702 ✓	Customer	110394	2028851	7 5054121	12/20/13
SPECIFICATIONS: MS2 Issue CB, AS7245 Rev.A paragraphs 2 & 3.1 ✓ p/n: WR-WC-0475 ✓					

ITEM DESCRIPTION		
DESCRIPTION	SPEC. CLASS	HEAT
CHQ 304 ✓ FULL HARD Bright .0475 500LB PLReel Clean	Melt mill ✓ NAS Country of origin ✓ USA	J7A7 ✓
	QTY SHIP 4345 ✓	025

CHEMICAL ANALYSIS						
C .0709 ✓	SI .3795 ✓	MN .4865 ✓	P .0260 ✓	S .001 ✓	CR 18.0395 ✓	NI 8.0065 ✓
MO .1490 ✓	FE Balance ✓	CU .2040 ✓	N .0511 ✓			

MECHANICAL PROPERTIES						
AS SHIPPED PROPERTIES:						
DIAMETER .04751" ✓	TENSILE 198.200 KSI ✓	YIELD 177.200 KSI ✓	ELONGATION 2.500 % ✓	Y/T RATIO 0.890 ✓		
AFTER HEAT TREAT PROPERTIES:					CHEMICAL ANALYSIS O.K. JAN 03 2014 QUALITY ASSURANCE HELICOIL PROD.	

Wire was solution annealed at 1900F min before final draw ✓  
Passed cold bend, coil and stretch test. ✓ Tested to ASTM A479-04 ✓  
Raw material is DFARS 252.225-7009 compliant. ✓ Rod produced by USA ✓

The material as shipped is free from mercury contamination. I certify the chemical analysis and physical and mechanical test results reported above are correct as contained in the records of the company.

Very truly yours,

*Thomas*

AUTHORIZED SIGNATURE



# TORQUE TEST REPORT



PART NUMBER 3591-7CN656	WIRE LOT NUMBER W-5054121	WORK ORDER NUMBER 786832	WORK ORDER QUANTITY 25000
THREAD SIZE 7/16-20 S/L	SPECIFICATION NUMBER PP3	UNITS LB-IN	MACHINE NUMBER 369

PLATED ☐AFTER H/T ☐BEFORE H/T ☐1st PIECE ☐IN-PROCESS ☐FINAL ☒

S P E C S	1st. CYCLE				7th CYCLE		15th CYCLE	
	INSTALLATION		BREAKAWAY		INSTALLATION		REMOVAL	
	100 LB-IN	MAX	14 LB-IN	MIN	100 LB-IN	MAX	14 LB-IN	MIN
TEST RESULTS								
1	49.2	MAX	42.4	MIN	31.2	MAX	22.4	MIN
2		MAX		MIN		MAX		MIN
3		MAX		MIN		MAX		MIN
4		MAX		MIN		MAX		MIN
5		MAX		MIN		MAX		MIN
6		MAX		MIN		MAX		MIN

DISPOSITION ACCEPTED	INSPECTOR 2592	DATE 3.24.14
-------------------------	-------------------	-----------------





P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
15	200	EA	MS20615-3M3		S140515001C	ALLFAST FASTENING	53551		

  
\_\_\_\_\_  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15

# ALLFAST

**FASTENING SYSTEMS, INC.**

P.O.Box 3166 - 15200 Don Julian Road  
City Of Industry, California 91745-1098  
Phone (626)968-9388 - Fax (626)968-9393  
www.allfastinc.com

## CERTIFICATE OF CONFORMANCE

DATE: 06/06/2014

CUSTOMER NAME: B/E AEROSPACE

PURCHASE ORDER: 0XET09

PART NUMBER: MS20615-3M3

REV: 5

LOT CONTROL NUMBER: S140515001C

MATERIAL LOT NUMBER: S310614

MATERIAL VENDOR: CARPENTER TECHNOLOGY

CERTIFICATION NUMBER: 000167707

NOMENCLATURE: Solid Rivet

QUANTITY: 274 LB

SHIPPER NUMBER: 100295178460

DATE OF MANUFACTURE: 04/29/2014

HEAT LOT NUMBER: 570062

MATERIAL TYPE: MONEL

PROCUREMENT SPECIFICATION: N/A

SHEAR STRENGTH REQUIRED:	49,000 PSI - 59,000 PSI		
SHEAR TEST RESULTS:	1: 54,309 PSI	2: 53,624 PSI	
	3: 55,980 PSI	4: 55,796 PSI	5: 55,138 PSI
	6: 55,943 PSI	7:	8:
	9:	10:	

DIMENSIONAL INSPECTION

SAMPLE SIZE: 6

RESULTS: ACCEPTABLE

ASTM GRAIN SIZE #: N/A

DRIVEABILITY: ACCEPTABLE

FINISH: N/A


COMMENTS: ECCN #9A991.

The undersigned hereby certifies that the product(s) supplied herewith were manufactured and inspected in accordance with all applicable drawings and specifications, and conforms to all applicable government and/or customer requirements. All supporting documentation is on file and is available for review upon request.

The aforementioned items were manufactured by Allfast Fastening Systems, Inc at 15200 Don Julian Road, City of Industry, California 91745.

This certification shall not be reproduced, except in full, without written approval of Allfast Fastening Systems, Inc. Recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under federal law.

Country of origin: USA

B/E Aerospace, Inc. - Consumables Management Self Release	
Signature and Stamp: 	AF 5
Date: 6/6/2014	



  
QUALITY ASSURANCE REPRESENTATIVE

Page 1 of 1

MANUFACTURERS OF AIRCRAFT AND COMMERCIAL FASTENERS

# CERTIFICATE OF TESTS

ABNAHMEPRUEFZEUGNIS

CERTIFICAT DE CONTROLE

CERT SERIAL# 000903603

JAN 06 2014

S310614

AF 92



## CARPENTER

Carpenter Technology Corporation  
101 West Bern Street, Reading, Pa. 19601  
Tel: (610) 208-2000 (800) 338-4592

12/12/13

CUSTOMER / BESTELLER / CLIENT

- THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.
- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
- MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.
- THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

SELLER / VERKÄUFER / VENDEUR PAGE 1 OF 2

ALLFAST FASTENING SYSTEMS INC.  
P.O. BOX 3166  
CTY OF INDUSTRY, CA 91744

CARPENTER TECHNOLOGY CORP

101 W. BERN STREET  
READING, PA 19601

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
118023-21	LOS627801 L28218	12/12/13	966.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE: 570062

PRODUCT DESCRIPTION: NICKEL COPPER ALLOY 400 ANNEALED COLD FINISH SEAM FREE C  
HDG CL C3 PRECOAT/GREASE  
PART NUMBER: M-303-3

SPECIFICATION: ALLFAST M-303 (DASH NO. -3) REV Q (05/30/12) EXCPT LTR  
(08/19/10) APPROVED  
QQ-N-281D AMD 2 (10/23/85) (CLASS A)  
AS 7233 (CHEM.ONLY) (04/24/92) (CHEMISTRY ONLY)  
ALLFAST POS-100 (06/ /09)  
AS 9100 REV C (01/ /09)  
DFARS 1998 EDITION  
ALLFAST Q-102 REV G (03/19/07)

ALLOY VERIFICATION  
HAS BEEN PERFORMED

AF 92

SIZE 0.093000 IN. ( 2.36 MM) RD WIRE

PRIMARY HEAT CHEMISTRY(WT%): (TEST METHOD IS SHOWN IN PARENTHESIS)

C (COM)	MN(XRF)	SI(XRF)	P (OES)	S (COM)	NI (XRF)
0.04	1.22	0.18	0.01	LT .001	65.63
CU(XRF)	CO(XRF)	SN(MS )	AL(OES)	TI(XRF)	FE(XRF)
30.72	0.04	LT .001	0.02	0.01	1.64
NI+CO	PB(MS )	ZN(MS )			
65.67	0.0003	LT .001			

EACH LOT HAS BEEN SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH QQ-N-281D AMD 2 AND MEETS ALL SPECIFICATION REQUIREMENTS EXCEPT SIZE TOLERANCES.

MATERIAL SUPPLIED MEETS THE TECHNICAL REQUIREMENTS OF THE SPECIFICATION(S) NOTED ON THIS ORDER.

THIS HEAT MELTED BY THE ELECTRIC ARC/AOD PROCESSES

SHEAR STRENGTH - 50.5 KSI RIVET TOOL SHEAR ASTM-B565 METHOD CONVERTED FROM DOUBLE RESTRAINED SHEAR

CONTINUED ON NEXT PAGE

This certification is made to the customer printed on this form. Carpenter neither makes, nor assumes responsibility for, any representation or certification to other parties.  
Die vorliegende Zertifizierung ist nur für den in diesem Formular genannten Kunden gültig. Carpenter übernimmt gegenüber Dritten keinerlei Haftung für die ausgewiesenen Daten oder Zertifizierungen.  
Ce certificat est uniquement valable pour le client dont le nom est imprimé sur ce formulaire. Carpenter n'assume pas de responsabilité pour une certification vis-à-vis d'une tierce personne.

**CERTIFICATE OF TESTS**  
CERT SERIAL# 000903603

**ABNAHMEPRUEFZEUGNIS**

**CERTIFICAT DE CONTROLE**



**CARPENTER**

Carpenter Technology Corporation  
101 West Bern Street, Reading, Pa. 19601  
Tel: (610) 208-2000 (800) 338-4592

**S810614** (AF 92)

- THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.
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12/12/13

CUSTOMER / BESTELLER / CLIENT

SEILER / VERKÄUFER / VENDEUR PAGE 2 OF 2

ALLFAST FASTENING SYSTEMS INC.  
P.O. BOX 3166  
CTY OF INDUSTRY, CA 91744

CARPENTER TECHNOLOGY CORP

101 W. BERN STREET  
READING, PA 19601

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
118023-21	LOS627801 L28218	12/12/13	966.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE: 570062

TENSILE AS SHIPPED, LOAD VALUE:	KSI (MPA)	85.5 (590) 591 LBS	83.0 (572) 574 LBS	86.5 (596) 589 LBS
TENSILE AS SHIPPED, LOAD VALUE:	KSI (MPA)	84.5 (583) 574 LBS	86.0 (593) 586 LBS	84.0 (579) 571 LBS
TENSILE AS SHIPPED, LOAD VALUE:	KSI (MPA)	86.5 (596) 590 LBS	84.5 (583) 578 LBS	86.0 (593) 590 LBS
TENSILE AS SHIPPED, LOAD VALUE:	KSI (MPA)	83.0 (572) 570 LBS	82.0 (565) 567 LBS	85.0 (586) 585 LBS
TENSILE AS SHIPPED, LOAD VALUE:	KSI (MPA)	84.0 (579) 577 LBS	84.0 (579) 579 LBS	84.5 (583) 583 LBS
TENSILE AS SHIPPED, LOAD VALUE:	KSI (MPA)	84.0 (579) 576 LBS	85.0 (586) 578 LBS	83.5 (576) 574 LBS

MATERIAL HAS BEEN MELTED AND MANUFACTURED IN THE USA WHICH IS A QUALIFYING COUNTRY TO DFARS REQUIREMENTS 252.225-7014 WITH ALTERNATE 1 FOR QUALIFYING COUNTRY 225.872.1, SUPERSEDED BY DFARS REQUIREMENTS DFARS 252.225-7008 AND 252.225-7009.

THIS ORDER WAS MANUFACTURED IN ACCORDANCE WITH CARPENTER SPECIALTY ALLOYS OPERATIONS QUALITY PROGRAM MANUAL, REVISION 30 DATED 09/28/11.

CARPENTER'S QUALITY MANAGEMENT SYSTEM WAS REGISTERED AS OF NOVEMBER 24, 2010 TO THE REQUIREMENTS OF ISO 9001:2008 APPROVAL CERTIFICATE 10-1385R BY PERFORMANCE REVIEW INSTITUTE. THIS CERTIFICATE OF TEST IS TYPE 3.1 PREPARED IN ACCORDANCE WITH EN 10204 (DIN 50049). WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS, AS DOCUMENTED IN THIS CERTIFICATE OF TESTS.

TEST METHODS ARE PER THE ASTM STANDARDS ON FILE AND IN EFFECT AT TIME OF ORDER ACCEPTANCE, STANDARD PRACTICES, OR AS AGREED UPON BETWEEN CARPENTER & CUSTOMER.

DANIELLE A MURPHY  
ADMINISTRATOR - QUALITY  
CARPENTER TECHNOLOGY CORPORATION

M-303-3

*Danielle A. Murphy*

This certification is made to the customer printed on this form. Carpenter neither makes, nor assumes responsibility for, any representation or certification to other parties.  
Die vorliegende Zertifizierung ist nur für den in diesem Formular genannten Kunden gültig. Carpenter übernimmt gegenüber Dritten keinerlei Haftung für die ausgewiesenen Daten oder Zertifizierungen.  
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Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
23	1	EA	NAS1149D0663J		X6816	ANILLO INDUSTRIES	10630		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15

**ANILLO Industries, Inc.**

2090 NORTH GLASSELL STREET, ORANGE, CA 92865-3391 USA  
PLEASE REMIT TO  
P.O. BOX 5586 ORANGE, CA 92863-5586 USA  
(714)637-7000 (562)924-6632 FAX(714) 637-3022

AS9100  
HACAP CP  
ISO 9001  
CERTIFIED

**560278****Packing List &  
Certification**

WE ACCEPT  
VISA/MASTER/DISCOVER/AMEX

<b>SOLD TO</b>		<b>1165</b>	<b>SHIP TO</b>		<b>E</b>
B/E AEROSPACE, INC. ATTN: ACCOUNTS PAYABLE DEPT. P.O. BOX 025263  MIAMI, FL 33102-5263			B/E AEROSPACE, INC. CONSUMABLES MANAGEMENT 9835 NW 14TH ST  MIAMI, FL 33172		
DATE ORDER REC'D	ORDER NUMBER	INVOICE DATE	SHIPPED VIA	TERMS	
12/19/2011	1A1294		FEDXG 033101490	1% 10 DAYS, NET 30	
ITEM	ORDERED	SHIPPED	DESCRIPTION	NET WEIGHT	

1 337,940 **36000** NAS1149D0663J  
REV 5 /LOT#X6816 /MIN/MAX /QCR:1,4,6,8,15,16 /AN960JD616  
ECCN: 9A991 Schedule B#: 7616.10.8000 COO: USNLR

We certify that: 1. item number 1 above is manufactured in accordance with the material and processing specifications of this order.  
2. We certify that the material on this order conforms in all respects to the current applicable government and/or manufacturer's specification. Test reports are on file and are available for examination on all Anillo manufactured parts. All claims for errors or shortages must be made within 10 days after receipt of goods.  
No good to be returned without written authorization. All claims for defective material must filed within 30 days of shipment to receive consideration. We do not assume financial responsibility or liability from the use of products sold, other than the replacement value of the products sold, if claimed within the specified time limit above.

&lt;&lt; R.M.A.# REQUIRED FOR RETURNS &gt;&gt;

&lt;&lt; TO THE BEST OF OUR KNOWLEDGE, PARTS ARE MERCURY FREE &gt;&gt;

**Certification**

B/E Aerospace, Inc.  
Consumable Management  
Self Replace

Signature & Stamp: Date: 2-14-14BY Ben Omidwar

Ben Omidwar, Quality Assurance Manager

FI 4.03.05



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXaerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172

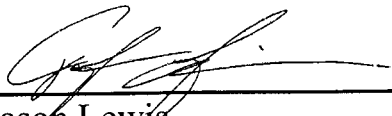
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**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
9	200	EA	CR3523-4-02		86895587	CHERRY AEROSPACE SAN 11815			

  
\_\_\_\_\_  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15



**CHERRY®**  
AEROSPACE  
SPS Fastener Division, a PCC Company

Cherry Aerospace  
1224 East Warner Avenue  
Post Office Box 2157  
Santa Ana, CA 92707-0157  
USA



# PACKING LIST

Order No: SO308976 Page: 1  
Order Date: 08/24/07  
Print Date: 09/26/07



Sold-To: 10015341



Ship-To: 19000244

S O L D T O	M&M AEROSPACE HARDWARE
	PO BOX 025263
	MIAMI, FL 33102-5263
	USA

S H I P T O	M&M AEROSPACE HARDWARE
	10000 N.W. 15TH TERRACE
	MIAMI, FL 33172
	USA

Salesperson (s):110

Purchase Order: 0BN778

Credit Terms: 1%10,30  
1%10, Net 30

Ship Via: YELLOW

FOB: Origin - Collect

## Remarks:

IF UNDER 150# SHIP FEDEX GROUND COLLECT ACCOUNT# 0331-0149-0  
IF OVER 150# SHIP WATKINS MOTOR LINE ACCOUNT# 018757 - DO NOT INSURE  
DO NOT PREPAY AND ADD TO ANY OF THE ABOVE METHODS  
DO NOT SHIP EARLIER THAN TWO (2) WEEKS PRIOR TO DUE DATE, UNLESS SPECIFIED.

BRITISH AEROSPACE APPROVAL# BAe/AG/30158/MAA to BAe/AG/QC/SC1 PART 3  
AIRBUS APPROVAL# 30114

GOODS OF UNITED STATES ORIGIN

FASTENERS ECCN: 9A991d SCHEDULE B# 8803300010  
TOOLS ECCN: EAR99 SCHEDULE B# 8467290095

Ln	Item Number	Site T LocationLot/Serial	Qty Open Qty to Ship UM	Promised Shipped
1	CR3523-4-02	1600		EA 09/27/07
	Customer Item: NAS9307M-4-02			
	* PART MEETS DFARS CLAUSE 252.225-7014 ALT I			
	* PREFERENCE FOR DOMESTIC SPECIALTY METALS			
		A0603 86895329		
		A1004 86895578	10500.0	( )
		B0704 86895242	21200.0	( )
		F0204 86895557	15100.0	( )
		H0303 86895587	9500.0	( )
			23200.0	( )

TEST REPORTS  
ENCLOSED DO  
NOT DESTROY

## CERTIFICATION

## ATTENTION: PURCHASING DEPARTMENT

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications, Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

Quality Assurance Representative

Signed

SIM NGUYEN



**CHERRY AEROSPACE**1224 East Warner Avenue  
Santa Ana, CA 92707-0157Accredited Chemical Processing  
Heat Treating  
ISO/IEC 17025  
Material Testing Lab**Final Inspection & Test Report**  
**CherryMax® Rivet**

An ISO9001 and AS9100 registered company. OASIS #6111041606

Part Numbers	RevProc. Spec.	Rev	Lot I.D. No.: <b>86895587</b>
CR3523-4-02	AB PS-CMR-3000	R	
			Lot Size: <b>24,000</b>
			MFG. Date: <b>September 25, 2007</b>

**ASSEMBLY DATA**

TYPE	ID #	CERT #	MATERIAL	FINISH	LUBE
Rivet	86879838	A55879	QQ-N-281/MONEL	None	None
Stem	86867566	A55668	AMS5657 / 15-7PH	None	KG FA / MIL-L-46010, Type I
Collar	00000000	A54793	A-286 / AMS5731	Passivate per AMS2700	None

W.O. #: 5291258

Final Lube: None

**MECHANICAL STRENGTH TESTS**

MIN REQ'D SAMPLE SIZE SPECS	INSTALLED SHEAR		TENSION		SPINDLE RETENTION		DISASSEMBLY
	651		400		150		10
	5	N/A	5	N/A	5	N/A	5
	C-N	B	C-N	B	C-N	B	C-N
RESULTS	991		691		289		83
	982		711		329		71
	993		728		265		97
	972		733		287		90
	957		710		282		41

C=CR N=NAS  
M=MIL B=BAC  
LOAD VALUES  
IN POUND**METALLURGICAL AND OTHER RELATED TESTS/REQUIREMENT**

PCS	ITEM	STATUS	PCS	ITEM	STATUS
125	EXAMINATION	PASS	20	INSTALLATION (Min and Max Grips)	PASS
	Locking feature (missing collar/spindle)			Spindle Protrusion/Recession	
	Roundness/Concentricity			Collar Protrusion	
	Dimensional, ID Marks, Tool Marks/Nicks			Blind Head Dia./Formation	
	Visual (grip/material code, ID)			Tightness in plate	
	Laps, seams, folds				

**Comments:**Blind Fastener  
Meets NAS1687 (Revision 2) sheet take-up test requirements.

Tr. Rev: -	Q Code
Rev. Date: 9/25/2007	V10
Inspector I Reyes	
Insp. Control #: 344750	

Cherry Aerospace certifies that the product tested above conforms to all referenced specifications listed and that the original data are available for review upon sufficient notice. Cherry Aerospace further certifies that the articles listed above have been manufactured and inspected in accordance with FAA TSO-C148. The conditions and tests required for TSO approval of this article are minimum performance standards. Aircraft fasteners approved under this TSO are not necessarily interchangeable with other aircraft fasteners approved under this TSO. Substitution of parts may only be done if acceptable to or approved by the FAA Administrator.

This test report shall not be reproduced except in full, without the written approval of the laboratory.  
The recording of false, fictitious, or fraudulent statement or entries on the certificate may be punished as a felony under Federal law.



**CHERRY<sup>®</sup> AEROSPACE**  
SPS Performance Products, a PCC Company

1224 East Warner Avenue  
Santa Ana, CA 92707-0157



*Nadcap*  
Accredited Chemical Processing  
Heat Treating  
ISO/IEC 17025  
Material Testing Lab

## Final Inspection & Test Report CherryMax<sup>®</sup> Rivet

An ISO9001 and AS9100 registered company. OASIS #6111041606

### Customer Parts List

Lot I.D. No.: 86895587

Rev: -

<u>Customer Part Number</u>	<u>Rev</u>	<u>Proc. Spec.</u>	<u>Rev</u>
NAS9307M-4-02	3	NAS1687	2



**BROWN-PACIFIC, INCORPORATED**  
P.O. BOX 3288 / SANTA FE SPRINGS / CALIFORNIA 90670  
(562) 921-3471 • (562) 921-7012 FAX

# MATERIAL TEST REPORT

FOB	SHIP VIA	JOB. NO.	INVOICE NO.
SFS	BP TRUCK		170955
SHIP TO SOLD TO	CHERRY AEROSPACE LLC 1224 E. WARNER AVE SANTA ANA, CA 92707-0157	ORDER DATE 07/31/07	THIS MATERIAL WAS MANUFACTURED AND TESTED IN CONFORMANCE WITH THE NOTED SPECIFICATIONS. THE INFORMATION PRESENTED HEREIN IS CORRECT AS CONTAINED IN THE COMPANY RECORDS.  BY: <i>A. Lopez</i> A. LOPEZ, LAB SUP.  9/12/2007 GM
	HUNTINGTON ALLOYS/SPECIAL MTLs 3200 RIVERSIDE DR ATN: RACHEL T HUNTINGTON, WV 25705-1771	CUST. P.O. NO. 83963	
		DUE DATE 08/31/07 <b>4 COILS</b> <b>697</b>	
PRODUCT ORDERED		QTY. ORDERED	
0.375 DIA TYPE M-400 CONVERTED TO 0.1225/0.1235 DIA SEAMSAFE MIRAFLEX COATED COIL		650	KNOWINGLY OR WILLFULLY RECORDING FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL LAW, TITLE 18 CHAPTER 47.

## SPECIFICATIONS

M015.1230 REV T, QQ-N-281-D CLASS A CHEM ONLY, AMS 4730E CHEM ONLY

GRADE	MILL NO.	HEAT NO.
M-400	09	M85M7BR13

## CHEMICAL ANALYSIS

C: 0.035      AL: 0.02  
MN: 0.99      TI:  
P:              B:  
  
S: 0.002      CB:  
SI: 0.14      TA:  
NI: 64.36      CB+TA:  
  
CR:              CU: 32.98  
MO:              SE:  
CO:              N:  
  
V:              FE: 1.47  
CA:              PB:  
MG:              BI:

ASTM GRAIN SIZE: 4/5  
SPECIAL METALS, USA  
MACRO:  
MICRO:  
OTHER:

## MECHANICAL PROPERTIES AND CAPABILITY

AS SHIPPED PROPERTIES	TENSILE, KSI	79.0	YIELD, KSI	58.5	% ELON.
	% RA		HARDNESS		SHEAR, KSI
ETT °F	TENSILE, KSI		YIELD, KSI	% ELON	% RA
STRESS RUPTURE	TEMP °F	STRESS, KSI	HOURS	% ELON	
	TEMP °F	STRESS, KSI	HOURS	% ELON	
H.T. PROCEDURE					
	TENSILE, KSI		YIELD, KSI	% ELON	
	% RA		HARDNESS	SHEAR, KSI	
H.T. PROCEDURE					
	TENSILE, KSI		YIELD, KSI	% ELON	
	% RA		HARDNESS	SHEAR, KSI	
H.T. PROCEDURE					
	TENSILE, KSI		YIELD, KSI	% ELON	
	% RA		HARDNESS	SHEAR, KSI	



SEP 13 2007

Inc. 2005-1-1  
008557BR13



A55879

THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT  
STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE  
A FELONY UNDER FEDERAL STATUTE.  
WESTERN U.S.

FORM 8

HUNTINGTON ALLOYS  
A Special Metals Company  
HUNTINGTON, WEST VIRGINIA 25720



BROWN PACIFIC INC  
3639 E BORA DR  
MOUNTAIN VIEW CA 90870

BROWN PACIFIC INC  
PO BOX 3266  
MOUNTAIN VIEW CA 90870

CERTIFIED MATERIAL TEST REPORT

No. 42042

HA ORDER NO./ITEM 400002678 1	DATE 05/09/07	PAGE 1	OF 2
QUANTITY 10188 LBS	INSPECTED BY HA/SNC		
CHARGE ORDER NO. HONEL 400LC .375	MARK ORDER NO. HONEL 400LC .375		
DESCRIPTION OF MATERIAL SHIPPED HONEL ALLOY 400 HA HOB - COIL HOT FIN HOT FIN .3750 IN COIL			

THIS IS TO CERTIFY THAT ALL REQUIRED SAMPLING INSPECTIONS AND TESTS  
HAVE BEEN PERFORMED IN ACCORDANCE WITH THE ORDER AND SPECIFICATION  
REQUIREMENTS. THE TEST REPORT REPRESENTS THE ACTUAL ATTRIBUTES OF  
THE MATERIAL FURNISHED AND THE VALUES SHOWN ARE CORRECT AND TRUE.  
THE MATERIAL DESCRIBED BY THIS CERTIFICATE IS IN FULL COMPLIANCE WITH  
ALL ORDER AND INSPECTION REQUIREMENTS. WE HEREBY CERTIFY THAT THE  
BELOW FIGURES ARE IN ACCORDANCE WITH THE SPECIFIED CONTRACT REQUIRE-  
MENTS.

*P. D. Custer*

QUALITY CERTIFICATION REPRESENTATIVE

\*\*\*\*\*THIS REPORT RELATES ONLY TO THE ITEM(S) TESTED AND MAY NOT BE REPRODUCED EXCEPT IN FULL.\*\*\*\*\*

SPECIFICATIONS: BROWN-PACIFIC S-3001 REV 2-10-98  
US FED QQ-W-281D AN 2 CLASS A CHEM ONLY SAE AMS 4730E CHEM ONLY/  
QE S-400 (9-1-2006).  
QUALITY SYSTEM CERTIFICATION: ISO 9001:2000 (ABS-QE CERT. 30125);  
EN 10 204/DIN 50049 (TYPE 3.1)

UNS: N04400

CHEMICAL ANALYSIS (WT %)								
HEAT#	C	MN	FE	S	SI	CU	NI	AL
W05M7BR	0.035	0.99	1.47	0.002	0.14	32.98	64.36	0.02

THE % OF NICKEL INCLUDES A SMALL AMOUNT OF COBALT  
MELT METHOD: AIR

A55879



Inco Alloys  
09M85M7BR13

MECHANICAL PROPERTIES						
HARD	GRAIN	YIELD	TENSILE	WELD	R/A	DEG
NESS	SIZE	1XPSI	PSI	NONE	X	F
			X 100 X 100			

W05M7BR 13 12 PCS.  
HARDNESS - HRB - AS SHIPPED 74.9  
GRAIN SIZE - AS SHIPPED AGS ASTM NO. 10  
NORMAL - TEAM

MELTING SOURCE: SNC-HA

COUNTRY OF ORIGIN: MELTED AND MANUFACTURED IN THE USA



SEP 13 2007

MAY 14 2007

E: THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT  
STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE  
A FELONY UNDER FEDERAL STATUTE.

STERN U.S.

FORM 5

# HUNTINGTON ALLOYS A Special Metals Company

HUNTINGTON, WEST VIRGINIA 25720



BROWN PACIFIC INC  
3639 E 80th DR  
AMTA FE SPGS CA 90670

## CERTIFIED MATERIAL TEST REPORT No. 42042

HA ORDER NO./ITEM 400002678 1	DATE 05/09/07	PAGE 2	OF 2
----------------------------------	------------------	-----------	---------

QUANTITY 10188 LBS	INSPECTED BY HA/SKC
-----------------------	------------------------

CHARGE ORDER NO. HOMEL 400LC .375	MARK ORDER NO. HOMEL 400LC .375
--------------------------------------	------------------------------------

DESCRIPTION OF MATERIAL SHIPPED	HOMEL ALLOY 400 HR ROD - COIL HOT FIN HOT FIN .3750 IN COIL
---------------------------------------	--

THIS IS TO CERTIFY THAT ALL REQUIRED SAMPLING INSPECTIONS AND TESTS  
HAVE BEEN PERFORMED IN ACCORDANCE WITH THE ORDER AND SPECIFICATION  
REQUIREMENTS. THE TEST REPORT REPRESENTS THE ACTUAL ATTRIBUTES OF  
THE MATERIAL FURNISHED AND THE VALUES SHOWN ARE CORRECT AND TRUE.  
THE MATERIAL DESCRIBED BY THIS CERTIFICATE IS IN FULL COMPLIANCE WITH  
ALL ORDER AND INSPECTION REQUIREMENTS. WE HEREBY CERTIFY THAT THE  
BELOW FIGURES ARE IN ACCORDANCE WITH THE SPECIFIED CONTRACT REQUIRE-  
MENTS.

*P. D. Custer*  
QUALITY CERTIFICATION REPRESENTATIVE

BROWN PACIFIC INC  
PO BOX 3188  
AMTA FE SPGS CA 90670

CHEMICAL ANALYSIS AS REQUIRED FOR CARBON, SULFUR, NITROGEN OR OXYGEN IS PERFORMED BY COMBUSTION TECHNIQUES.  
ALL OTHER REPORTED ELEMENTS ARE ANALYZED BY X-RAY AND/OR EMISSION SPECTROSCOPY."

QUALITY SYSTEM MEETS REQUIREMENTS OF DIRECTIVE 97/23/EC (PRESSURE EQUIPMENT DIRECTIVE),  
INDEX 1, CHAPTER 4.3 PER ABS GROUP LTD CERTIFICATE 008 (EXPIRES AUGUST 2008) AND  
IV CERTIFICATE 20674928 (EXPIRES MAY 2008)"

AUTHORIZED QUALITY CERTIFICATION REPRESENTATIVES:  
E. BOLEN, P.D. CUSTER, H.A. HARRISON, P. WAUGH

A55879



Inco Alloys  
00M85M7BR13



SEP 13 2007

CERTIFICATE OF TESTS ABNAHMEPRUEFZEUGNIS CERTIFICAT DE CONTROLE

CERT SERIAL# 000607714



**CARPENTER**

Carpenter Technology Corporation  
101 West Bern Street, Reading, Pa. 19601  
Tel: (610) 200-2000 (800) 338-4592

08/07/07

CUSTOMER / BESTELLER / CLIENT

CHERRY AEROSPACE LLC  
PO BOX 2157  
1224 E WARNER  
SANTA ANA CA 92787

- THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.
- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
- MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.
- THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

SELLER / VERKÄUFER / VENDEUR PAGE 1 OF 1

CARPENTER TECHNOLOGY CORP  
RANCHO CUCAMONGA D.C.

8250 MILLIKEN AVE.  
RANCHO CUCAMONGA CA 91730

CUSTOMER ORDER NO / BESTELL-NR. / N° DE COMMANDE	CARPENTER WORKS-NR. / N° DE REFERENCE INTERNE	DATE / DATUM / DATE	WEIGHT / GEWICHT / POIDS
VPD083605	L28504	08/02/07	

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE 551538

PRODUCT DESCRIPTION: CARPENTER 15-7 PH ANNEALED CF WIRE FOR HEADING SC2  
STRAND CU/50AP JIT

SPECIFICATION: CHERRY AEROSPACE M-84 REV Y (06/14/07) EXCPT LTR (07/12/07)  
AMS 5657 REV B (02/07) (CHEM ONLY)

SIZE 0.104000 IN. (2.64 MM) RD WIRE

PRIMARY HEAT CHEMISTRY (WT%): (TEST METHOD IS SHOWN IN PARENTHESIS)

C (COM)	MN (XRF)	SI (XRF)	P (XRF)	S (COM)	CR (XRF)
0.07	0.54	0.18	0.012	LT 0.01	15.52
NI (XRF)	MO (XRF)	AL (XRF)	N (FUS)		
7.28	2.22	1.20	0.042		

CAPABLE OF A SURFACE FINISH OF MAX N7 (63 RA MAX).

(T)RANSVERSE	(L)ONGITUDINAL				
*YIELD STRENGTH (0.20%) KSI (MPA)	102.0 (703)	98.5 (679)	108.0 (745)		
TENSILE STRENGTH KSI (MPA)	172.0 (1186)	170.0 (1172)	173.0 (1193)		
ELONGATION IN 50% %	50.0	56.0	61.0		

\*YIELD STRENGTH APPROVED BY CUSTOMER

CAST ACCEPTABLE

MATERIAL PRODUCED ON THIS ORDER WAS MELTED AND MANUFACTURED IN THE U.S.A.  
MATERIAL SUPPLIED COMPLIES WITH THE REQUIREMENTS OF DFARS 252.225.7014  
(JUNE 2005) ALT. I AND SUBSECTION 225.872.1  
CARPENTER'S QUALITY MANAGEMENT SYSTEM WAS REGISTERED AS OF SEPTEMBER 2, 2004 TO  
THE REQUIREMENTS OF ISO 9001:2000 APPROVAL CERTIFICATE 04-0540 BY PERFORMANCE  
REVIEW INSTITUTE. CERTIFICATE OF TEST IS PREPARED IN ACCORDANCE WITH PARAGRAPH  
3.1 OF EN 10204 (DIN 50049). WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE  
IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS.

VICKI L. CLAY  
MET RELEASE / REQUIREMENTS ANALYST  
CARPENTER TECHNOLOGY CORPORATION



SEP 06 2007

*SV J...*

Certified Corp  
Kistler



A55668



SPECIALTY METAL PRODUCTS DIVISION

21 TOELLES ROAD, P.O. BOX 5807, WALLINGFORD, CT 06492-7607

## CERTIFICATE OF TESTS

<b>SOLD TO:</b> CHERRY AEROSPACE LLC 1224 EAST WARNER AVE PO BOX 2157 SANTA ANA CA 92707-0157	<b>SHIPPED TO:</b> CHERRY AEROSPACE LLC 1224 EAST WARNER AVE SANTA ANA CA 92705	
<b>MATERIAL DESCRIPTION:</b> A286 .011 P/M .0005 X .066 P/M .001 P/N M-189-4 REV T QQ-P-35 AMS 5731	<b>PURCHASE ORDER NO:</b> VPO49817	<b>MANUFACTURING NO:</b> W110529
	<b>AMETEK ORDER NO:</b> 10034588	<b>ITEM NO:</b> TEXS66286-0110SS01
	<b>SHIPPED:</b> 5/21/07 12 Tests	<b>HEAT NO:</b> 547979
	<b>QTY CERTIFIED:</b> 211 lbs	

### CHEMICAL ANALYSIS (Wt %)

0.14	0.007	0.04	0.14	14.39
0.13	BALANCE	0.35	1.17	
24.44	0.017	0.001	0.21	
	2.30	0.27		

### PHYSICAL PROPERTIES AS PROCESSED :

Hardness 221.0 KNP  
Tensile Strength  
Yield Strength  
(at .2% offset)  
Elongation  
Bend Test  
Grain Size

MATERIAL IS DFARS COMPLIANT  
COUNTRY OF ORIGIN -USA, CARPENTER TECH

*R.M. Barra*  
Robert Barra

JUN 01 2007

02-20-07  
Date



A54793

ALL INFORMATION GIVEN AND RECOMMENDATIONS MADE HEREIN ARE BASED UPON OUR RESEARCH AND ARE BELIEVED TO BE ACCURATE BUT NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, IS MADE WITH RESPECT THERETO OR WITH RESPECT TO THE INFRINGEMENT OF ANY PATENT. OUR PRODUCTS ARE SOLD ON THE UNDERSTANDING THAT THE USER IS SOLELY RESPONSIBLE FOR DETERMINING THEIR SUITABILITY FOR ANY PURPOSE. THIS INFORMATION IS NOT TO BE COPIED, USED IN EVIDENCE, RELEASED FOR PUBLICATION OR PUBLIC DISTRIBUTION WITHOUT WRITTEN PERMISSION FROM AMETEK, INC.

ISO 9001:2000  
CERTIFIED



**SPECIALTY METAL PRODUCTS**

21 Toelles Road, P. O. Box 5807  
Wallingford, CT 06492-7607 U. S. A.  
Telephone: 203-265-6731 Fax: 203-294-0196

**AMETEK**

**Certificate of Compliance**

TO: **CHERRY AEROSPACE LLC** \_\_\_\_\_

**Regarding:**

Your P.O Number VP049817 \_\_\_\_\_

Our Order Number 10034588 \_\_\_\_\_

Mill Number(s) W110529 \_\_\_\_\_

Heat Number(s) 547979 \_\_\_\_\_

Customer Part No. M-189-4 REV T  
(if applicable) \_\_\_\_\_

Quantity (wt./pcs.) 211<sup>lbs</sup> / 12 Reels

Shipping Date 5/2/07

Spec./Dwg. # M-189-4 REV T AMS 5731 QQ-P-35  
(if applicable)

JUN 01 2007



Metek Inc  
547979



A54793

We hereby certify that all items in the above shipment have been produced, inspected, and found to be in compliance with applicable drawings, referenced specifications, standards, and purchase order requirements. All documents utilized were to the revised level specified by the customer.

By: J.P. Chamberlain Title: QA Mgr.



RA 10.3.06



10/02/00  
CUSTOMER / BESTELLER / CLIENT

AMETEK  
MIKE HOLM  
21 TOELLES RD  
WALLINGFORD .CT 06492

SELLER / VERKAUFER / VENDOR / ...

CARPENTER TECHNOLOGY CORP  
ALLENTOWN DISTRIBUTION CENTE  
9784 COMMERCE CIRCLE  
KUTZTOWN PA 19530

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NUMBER/N°/N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
37312	PHL7192 L35635	09/28/06	1012

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE 547979

PRODUCT DESCRIPTION: CONSUMET A286 COLD FINISH ANNEALED TENSILE MIN 85.0 /  
MAX 105.0 KSI

SPECIFICATION: AMETEK S66286-0380 S66286 REV 3 (11/22/99) EXCPT LTR (04/19/06)  
AMS 5731 REV K (10/01) CHEMISTRY ONLY (EXCEPT TI: 2.00-2.35)  
AMS 5737 REV N (10/01) CHEMISTRY ONLY (EXCEPT TI: 2.00-2.35)

SIZE 0.038000 IN. ( 0.96 MM) RD WIRE

PRIMARY HEAT CHEMISTRY(WT%): (TEST METHOD IS SHOWN IN PARENTHESIS)

C (OES)	MN (XRF)	SI (XRF)	P (OES)	S (OES)	CR (XRF)
0.04	0.35	0.21	0.017	0.001	14.39
NI (XRF)	MO (XRF)	CU (XRF)	CO (XRF)	AL (OES)	TI (OES)
24.44	1.17	0.13	0.14	0.14	2.30
V (XRF)	B (OES)				
0.27	0.007				

TENSILE AS SHIPPED. KSI(MPA) 90.0( 621)

MATERIAL PRODUCED ON THIS ORDER WAS MELTED AND MANUFACTURED IN THE U.S.A.  
MATERIAL SUPPLIED COMPLIES WITH THE REQUIREMENTS OF DFARS 252.225.7014  
(JUNE 2005) ALT.1 AND SUBSECTION 225.872.1  
CARPENTER'S QUALITY MANAGEMENT SYSTEM WAS REGISTERED AS OF SEPTEMBER 2, 2004 TO  
THE REQUIREMENTS OF ISO 9001:2000 APPROVAL CERTIFICATE 04-0540 BY PERFORMANCE  
REVIEW INSTITUTE. CERTIFICATE OF TEST IS PREPARED IN ACCORDANCE WITH PARAGRAPH  
3.1 OF EN 10204 (DIN 50049). WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE  
IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS.

KAY C. DANTZLER  
MET RELEASE/CERT PREPARER  
CARPENTER TECHNOLOGY CORPORATION

12/2/06  
mmh

4 STEMS

JUN 01 2007



A54793

Kay C. Dantzler

This certification is made to the customer printed on this form. Carpenter neither makes, nor assumes responsibility for, any representation or certification to other parties.  
Die vorliegende Zertifizierung ist nur für den in diesem Formular genannten Kunden gültig. Carpenter übernimmt gegenüber Dritten keinerlei Haftung für die aus demselben Daten oder Zertifizierungen.  
Ce certificat est uniquement valable pour le client dont le nom est imprimé sur ce formulaire. Carpenter n'assume pas de responsabilité pour une certification valable vis-à-vis d'une tierce personne.



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
2	100	EA	CR3213-4-04		87579512	CHERRY AEROSPACE SAN	11815		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 0.4/20/15



**CHERRY®**  
**AEROSPACE**

SPS Fastener Division, a PCC Company

Cherry Aerospace  
1224 East Warner Avenue  
Post Office Box 2157  
Santa Ana, CA 92707-0157  
USA



# PACKING LIST

Order No: SO321668  
Order Date: 04/29/08  
Print Date: 12/13/11

Page: 1



Sold-To: 10015341

Ship-To: 19000244

S O L D T O	B/E AEROSPACE
	PO BOX 025263
	MIAMI, FL 33102-5263
	USA

S H I P T O	B/E AEROSPACE INC C.M.
	10000 N.W. 15TH TERRACE
	MIAMI, FL 33172
	USA

Salesperson (s):110

Purchase Order: 0EZ588

Credit Terms: Net 30  
Net 30

Ship Via: FED NATIONAL  
FOB: Origin - Collect

## Remarks:

IF UNDER 150# SHIP FEDEX GROUND COLLECT ACCOUNT# 0331-0149-0  
IF OVER 150# SHIP FED EX NATIONAL ACCOUNT# 018757 - DO NOT INSURE  
DO NOT PREPAY AND ADD TO ANY OF THE ABOVE METHODS  
DO NOT SHIP EARLIER THAN TWO (2) WEEKS PRIOR TO DUE DATE, UNLESS SPECIFIED.

\*\*\*\*\*  
BRITISH AEROSPACE APPROVAL# BAe/AG/30158/MAA to BAe/AG/QC/SC1 PART 3  
AIRBUS APPROVAL# 30114  
\*\*\*\*\*

GOODS OF UNITED STATES ORIGIN  
\*\*\*\*\*

FASTENERS ECCN: 9A991d SCHEDULE B# 8803300010  
TOOLS ECCN: EAR99 SCHEDULE B# 8467290095

**TEST REPORTS ENCLOSED**  
**DO NOT DESTROY**

Ln	Item Number	Site T LocationLot/Serial	Qty Open Qty to Ship	UM	Promised Shipped
6	CR3213-4-04 Customer Item: M7885/2-4-04 NAS9301B-4-04 NAS9301BNS-4-04 *IF APPLICABLE, PART MEETS DFARS CLAUSE 252.225-7014 ALT I *PREFERENCE FOR DOMESTIC SPECIALTY METALS	1600		EA	01/15/12
		A0202 87582678	12263.0		( )
		B0905 87579512	33184.0		( )
		C0502 87581152	34382.0		( )
		C0903 87577249	18192.0		( )
		D0305 87577280	33307.0		( )

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited

## CERTIFICATION

## ATTENTION: PURCHASING DEPARTMENT

Quality Assurance Representative

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications. Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

Signed

DAWN MILLER



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
28	30	EA	QS200M44S		082812	BREEZE CLAMPS	7Z588		

  
\_\_\_\_\_  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15

THIS  
MEMORANDUM

IS AN ACKNOWLEDGEMENT THAT A BILL OF LADING HAS BEEN  
ISSUED AND IS NOT THE ORIGINAL BILL OF LADING, NOR A  
COPY OR DUPLICATE, COVERING THE PROPERTY NAMED HEREIN.  
AND IS INTENDED SOLELY FOR FILING OR RECORD.

PACKING LIST  
SID#:



642125

NAME OF CARRIER **FEDEX GROUND** VENDOR#:  
RECEIVED, SUBJECT TO THE CLASSIFICATIONS AND LAWFULLY FILED TARIFFS IN EFFECT ON THE DATE OF THE RECEIPT BY THE CARRIER OF THE PROPERTY DESCRIBED IN THE ORIGINAL BILL OF LADING  
AT: SALTSBURG, INDIANA CO., PA 9/06/2012 FROM: **NORMA PENNSYLVANIA, INC**

**DBA: BREEZE INDUSTRIAL PRODUCTS** PAGE: 1

S B/E AEROSPACE INC.  
O PO BOX 025263  
L MIAMI, FL 33102-5263  
D

T  
O

CONSIGNED TO  
MAIL OR STREET ADDRESS FOR PURPOSE OF NOTIFICATION ONLY  
B/E AEROSPACE INC.  
9835 NW 14TH ST  
MIAMI, FL 33172

**SUBJECT TO SECTION 7**  
THE CARRIER SHALL NOT MAKE DELIVERY OF THIS SHIPMENT  
WITHOUT PAYMENT OF FREIGHT AND ALL OTHER CHARGES.  
**BREEZE INDUSTRIAL PRODUCTS**

FREIGHT: COLLECT

TRAILER#:

THE AGREED OR DECLARED VALUE OF THE PROPERTY IS STATED  
TO BE NOT EXCEEDING

PER

THIS SHIPMENT IS CORRECTLY DESCRIBED. CORRECT WEIGHT IS  
SUBJECT TO VERIFICATION BY ORIGIN INSPECTION BUREAU.

COLLECT ON DELIVERY  
\$

AND  
REMIT  
TO:

THIS IS TO CERTIFY THAT THE NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED,  
MARKED AND LABELED, AND ARE IN PROPER CONDITION FOR TRANSPORTATION, ACCORDING TO THE  
APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION.

DATE ENTERED	FGT	TERR.	CUSTOMER NO.	SHIP VIA	
8/14/2012	N	0206	02755005	015610431837216 FEDEX GROUND	
QTY ORDERED(EA)	ITEM NO	DESCRIPTION	BREEZE NO	QTY SHIPPED(EA)	BALANCE ON ORDER(EA)

ALL PRODUCTS ARE MADE IN USA UNLESS SPECIFIED ON LINE ITEM

600 1 200 44 S  
20044S/QS200M44S  
PO:OKFA94

324683

Cert Conformance and Chem/Phys required with all orders  
Do not substitute  
Each item must ship complete  
NAS1922 sizes 275 and up, must have lot #011311 or later.  
Do Not OVERSHIP/UNDERSHIP - Ship Exact Quantities on Order.

CONTAINER DESCRIPTIONS	WEIGHT/FGT AMT	EMP#	PRODUCT DESCRIPTION/TOTAL QTY
3 CARTONS	55 LBS .00	542	HOSE CLAMPS/CLASS 85 600

BREEZE INDUSTRIAL PRODUCTS SHIPPER, PER  
PERMANENT POST-OFFICE ADDRESS OF SHIPPER: 3582 TUNNELTON ROAD  
SALTSBURG, PA 15681-9594

9/06/12 8:32:01  
Driver Signature: \_\_\_\_\_



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
4	100	EA	CR3213-4-01		86642882	CHERRY AEROSPACE SAN	11815		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15





Inv # 01/20/15



25 DREXEL DR. PO BOX 250, BAY SHORE, NY 11706  
ISO9001/AS9100 REGISTERED QUALITY SYSTEM

QUALITY CONTROL RECEIVING INSPECTION REPORT

**PROGRAM KIT COMPONENT OR CHEMICALS OR STANDARD HARDWARE  
FOR STAND ALONE SALES ORDERS. PART IDENTIFICATION LABEL FOR  
SCANNING.**


CERT CNY06092200101

ITEM M7885/2-4-01

LOT 86642883

PON PURCHONDE
BRANCH MJ
Vendor: WESCO AIRCRAFT
Qty: 9,200
Manf: CHERRY TEXTRON
Rev: D

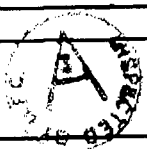
Part #..... M7885/2-4-01  
Lot ID..... 86642883  
Manufacturer.. CHERRY TEXTRON  
Qty this Lot.. 000009200  
Doc Lev..... MCT  
Rev..... D  
Sample Size... 000000005  
Inspector..... MJM  
Cert Date..... 09/22



**CUSTOMER CODE:** \_\_\_\_\_

*ms*

**PROCESSED BY: X**



**MJZ**

R5642530 00100

# Wesco Aircraft Hardware Corp

Pack Slip # 1467538

27727 Avenue Scott; Valencia, CA 91355

PH: 661 / 775-7200 FAX: /

Packing Slip



Page No 1 of 3

Date - 9/14/2006 14:54:58

Order # 2318749 SO



**Sold To:** UFC Aerospace Corp.  
25 Drexel Drive  
Bayshore NY 11706

**Ship To:** UFC Aerospace Corp.  
25 Drexel Drive  
Bayshore NY 11706

**Ordered By:** M NAGIR

**Acct #:** 105442 (0808)

**Shipping Instructions:** COL

**Carrier** United Parcel Service

**Customer PO#:** PUR00NDE

**Salesperson:** Miriam Fuster

**Acct #:** 105442 (0808)

**Related SO/PO**

**Payment Terms** 030 Net 30

* * * Quantities * * *					Item Number/Description	Cert Code	PromDt
Itm#	Shipped	Backordered	UM				

## 1.000 30000 0 EA \*M7885/2-4-01 Cert-MfrCofC, TR, RM, PC 9/14/2006  
\*\*\* BLINRIVMAX,PRT HD,PLATED AL/ST

S/C #	Manufacturer's Lot #:	Manufacturer Name	Lot Qty	TSO/PMA
SC#: 27924125 86642883	WAC SI 352	Cherry Aerospace LLC	461	TSO-C148
SC#: 27924123 86642882		Cherry Aerospace LLC	19200	TSO-C148
SC#: 27924125 86642883		Cherry Aerospace LLC	8739	TSO-C148
SC#: 27924123 86642882		Cherry Aerospace LLC	1600	TSO-C148

**Comments:**

DO NOT USE RPS FOR SHIPPING  
BAR CODING REQUIRED  
FOB ORIGIN  
UPS ACCT # 163502

FREIGHT ACCOUNT NUMBER: 163502

SEP 19 REC'D

End of Comments

Total # Boxes Total Weight





R5642530 00100

# Wesco Aircraft Hardware Corp

Pack Slip # 1467538

27727 Avenue Scott; Valencia, CA 91355

PH: 661 / 775-7200 FAX: /

## Packing Slip

Page No 2 of 3

Date - 9/14/2006 14:54:58

Order # 2318749 SO

**Sold To:** UFC Aerospace Corp.  
25 Drexel Drive  
Bayshore NY 11706

**Ship To:** UFC Aerospace Corp.  
25 Drexel Drive  
Bayshore NY 11706

**Ordered By:** M NAGIR

**Acct #:** 105442 (0808)

**Shipping Instructions:** COL

**Carrier** United Parcel Service

**Salesperson:** Miriam Fuster

**Acct #:** 105442 (0808)

**Related SO/PO**

**Customer PO#:** PUR00NDE

**Payment Terms** 030 Net 30

itm#	* * * Quantities * * *	Shipped   Backordered	UM	Item Number/Description	Cert Code	PromDt
------	------------------------	-----------------------	----	-------------------------	-----------	--------

**Processed By:** JEFFREYF



Pack Slip # 1467538

27727 Avenue Scott; Valencia, CA 91355

PH: 661 / 775-7200 FAX: /

Date - 9/14/2006 14:54:58

Page No 3 of 3

Order # 2318749 SO

**Sold To:** UFC Aerospace Corp.  
25 Drexel Drive  
Bayshore NY 11706

**Ship To:** UFC Aerospace Corp.  
25 Drexel Drive  
Bayshore NY 11706

**Ordered By:** M NAGIR

**Payment Terms** 030 Net 30

**Acct #:** 105442 (0808)

**Customer PO#:** PUR00NDE

**Acct #:** 105442 (0808)

**Salesperson:** Miriam Fuster

**Certificate of Conformance:**

Wesco Aircraft certifies that all products are of new manufacture. Documentation from the manufacturer certifies that the product meets all applicable Government, customer and/or manufacturer's specifications and requirements. Wesco certifies that the whole of the supplies detailed hereon have been received under cover of the Release Certificate quoted above and are in the same condition as when received. This documentation is maintained on file for 10 (ten) years and available upon request.

**Signed:**

   
Quality Assurance Department

We hereby notify you that no returns will be accepted without WESCO Returned Material Authorization number. Only lot traceable material will be accepted for return.



**CHERRY**  
AEROSPACE LLC

1224 East Warner Avenue  
Post Office Box 2157  
Santa Ana, CA 92707-0157  
USA



# PACKING LIST

Order No: S0294552  
Order Date: 03/24/06  
Print Date: 06/16/06

Page: 1



Sold-To: 15030003

Ship-To: 19000377

S O L D T O	WESCO JIT-LTA USA

S H I P T O	WESCO AIRCRAFT HDWE CORP 27727 AVE SCOTT VALENCIA, CA 91355 USA

Salesperson (s):102

Purchase Order: 521478

Credit Terms: 1%10, 30  
1%10, Net 30

Ship Via: P/U

FOB: Origin - Collect

## Remarks:

BRITISH AEROSPACE APPROVAL# BAe/AG/30158/CAL to BAe/AG/QC/SC1 PART 3  
AIRBUS APPROVAL # 30114

Ln	Item Number	Site T Location	Lot/Serial	Qty Open		Promised Shipped
				Qty to Ship	UM	
1	CR3213-4-01 Customer Item: NAS9301B-4-01 ASNA0078A401 B0207005-4-01 M7885/2-4-01 NAS9301BNS-4-01		1600		EA	06/07/06
			EZ LINE 86638593	34400.0	( )	
			EZ LINE 86642881	34700.0	( )	
			EZ LINE 86642882	34000.0	( )	
			EZ LINE 86642883	34100.0	( )	

**TEST REPORTS  
ENCLOSED DO  
NOT DESTROY**

PARTS DELIVERED  
IN ACCORDANCE WITH THE  
STANDARD AMENDMENTS  
AS AGREED BY  
TAF/EAOS.



## CERTIFICATION

## ATTENTION: PURCHASING DEPARTMENT

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications. Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

Quality Assurance Representative

Signed

**SIM NGUYEN**



**CHERRY<sup>®</sup> AEROSPACE LLC**1224 East Warner Avenue  
Santa Ana, CA 92707-0157**An ISO9001 and AS9100 registered company****Final Inspection & Test Report**  
**CherryMax<sup>®</sup> Rivet**

Part Numbers	Rev	Proc. Spec.	Rev	Lot I.D. No.:	86642883
CR3213-4-01	Y	PS-CMR-3000	P	Lot Size:	35,000
** See 2nd Page for the Customer Parts				MFG. Date:	June 13, 2006

**ASSEMBLY DATA**

TYPE	ID #	CERT #	MATERIAL	FINISH	LUBE
Rivet	86642883	A51158	QQ-A-430/5056	MIL-C-5541 CLEAR CL1A	None
Stem	86626553	A51481	AMS6322 / 8740ST	QQ-P-416/T2CL2/CAD PL	None
Collar	00000000	A50617	A-286 / AMS5731	Passivate per AMS2700	None

W.O. #: 5231004 Final Lube: None

**MECHANICAL STRENGTH TEST**

MIN REQ'D	INSTALLED SHEAR		TENSION		SPINDLE RETENTION		DISASSEMBLY
	N/A	N/A	N/A	N/A	125		10
SAMPLE SIZE					5	8	N/A
SPECS	C-N-M	B	C-N-M	B	C-N-M	M	B
RESULTS					252	247	34
					248	233	61
					245	232	63
					261	238	35
					254	242	33
						260	
						241	
						229	

C=CR N=NAS  
M=MIL B=BAC  
LOAD VALUES  
IN POUND

**METALLURGICAL AND OTHER RELATED TESTS/REQUIREMENTS**

PCS.	ITEM	STATUS	PCS.	ITEM	STATUS
126	EXAMINATION	PASS	20	INSTALLATION (Min and Max Grips)	PASS
	Locking feature (missing collar/spindle)			Spindle Protrusion/Recession	
	Roundness/Concentricity			Collar Protrusion	
	Dimensional, ID Marks, Tool Marks/Nick			Blind Head Dia./Formation	
	Visual (grip/material code, ID)			Tightness in plate	
	Laps, seams, folds				

**Comments:**

Blind Fastener

Tr. Rev:	Q Code
Rev. Date: 8/13/2006	V09
Inspector I Reyes	TAF 313 INSP
Insp. Control #: 336164	

Cherry Aerospace LLC certifies that the product tested above conforms to the latest referenced specifications listed and that the original data are available for review upon sufficient notice. Cherry Aerospace LLC further certifies that the articles listed above have been manufactured and inspected in accordance with FAA TSO-C148. The conditions and tests required for TSO approval of this article are minimum performance standards. Aircraft fasteners approved under this TSO are not necessarily interchangeable with other aircraft fasteners approved under this TSO. Substitution of parts may only be done if acceptable to or approved by the FAA Administrator.

This test report shall not be reproduced except in full, without the written approval of the laboratory.

The recording of false, fictitious, or fraudulent statement or entries on the certificate may be punished as a felony under Federal law.



**CHERRY AEROSPACE LLC**1224 East Warner Avenue  
Santa Ana, CA 92707-0157**An ISO9001 and AS9100 registered company****Final Inspection & Test Report  
CherryMax® Rivet**Lot I.D. No.: **86642883**Rev: **-****Customer Parts List**

<u>Customer Part Number</u>	<u>Rev</u>	<u>Proc. Spec.</u>	<u>Rev</u>
NAS9301BNS-4-01	3	NAS1686	3
ASNA0078A401	P	MIL-R-7885	D2
ASNA0078A401	P	NAS1686	3
ASNA0078A401	P	PS-CMR-3000	P
B0207005-4-01	D	MIL-R-7885	D2
B0207005-4-01	D	NAS1686	3
B0207005-4-01	D	PS-CMR-3000	P
M7885/2-4-01	D	MIL-R-7885	D2
NAS9301B-4-01	3	NAS1686	3



**CERTIFIED INSPECTION REPORT AND TEST RESULTS**

**NICHOLS WIRE, INCORPORATED**

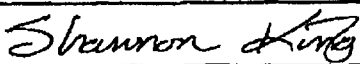
1547 Helton Drive - Florence, AL 35630

SHIP TO:

TEXTRON FASTENING SYSTEMS - TAF  
VMI / CONSIGNMENT AGREEMENT  
1224 EAST WARNER AVE  
SANTA ANA CA 92707-0157

SOLD TO:

TEXTRON FASTENING SYSTEMS - TAF  
VMI / CONSIGNMENT AGREEMENT  
1224 EAST WARNER AVE  
SANTA ANA CA 92707-0157

CUSTOMER PURCHASE ORDER NO. <b>VPO55354-1</b>			NW WORK ORDER NO. <b>95413</b>			 <b>AUTHORIZED SIGNATURE</b> <b>QUALITY CONTROL MANAGER</b>  We hereby certify that the material covered by this report has been inspected in accordance with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown on this sheet.			
DESCRIPTION <b>.123 5056 H32 STEM</b>									
FINISH									
CUSTOMER PART NO.			ALLOY <b>5056</b>		TEMPER <b>H32</b>				
NW PART NO. <b>H123A7</b>					DATE SHIPPED <b>02/24/2008</b>				
WEIGHT SHIPPED <b>2,092 lb</b>									
			ULTIMATE		YIELD		SHEAR		% ELONGATION
			STRENGTH K.S.I.		STRENGTH K.S.I.		STRENGTH K.S.I.		
			MIN MAX		MIN MAX		MIN MAX		
<b>K-837160</b>			<b>48.7 51.4</b>		<b>0.0 0.0</b>				<b>0.00</b>

COMMENTS:

QQA-430  
M005 .123 REV M ✓  
MILL SOURCE KAISER  
MADE IN USA  
K540 USED FOR 5056

**MAR 10 2008**



C H E M  C O M P	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		OTHERS	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
	5056	0.0000	0.3000	0.0000	0.4000	0.0000	0.1000	0.0500	0.2000	4.5000	5.6000	0.0500	0.2000	0.0500	0.1500
		NICKEL		ZINC		TITANIUM									
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
		0.0000	0.0000	0.0000	0.1000	0.0000	0.0000								
		ALUMINUM REMAINDER													



**KAISER ALUMINUM  
& CHEMICAL CORPORATION**

NICHOLS WIRE INC.  
1547 HELION AVE

**FLORENCE**

AL 35630

**NO DOGS**

600 KATBER DRIVE HEATH, OH 43056

NICHOLS WIRE INC.  
1547 KELTON AVENUE  
ATTENTION: AMANDA SOUTH

**FLORENCE**

RL 35630

**MADE IN USA**

NICHOLS		6396 01 0000		01	
CUSTOMER PURCHASE ORDER NO. & ITEM				NUMBER ORDER NO.	
11540				21440455	
ALLOY	CLAD.	TEMPER	GALVE	WIDTH	LENGTH
K540		F	.37500	00.0000	000.000
ITEM ORDERED					
ALY-JUMBO					
CUSTOMER SPECIFICATION					
PART NUMBER		SL. NUMBER		DATE SHIPPED	
6237KH		6396		12/16/05	
WEIGHT SHIPPED		NO. OF PIECES		GOVT. CONTRACT NO.	
40,670		191			

YORKER ALLIANCE & CHEMICAL CORPORATION (YACORP) HEREBY CERTIFIES THAT THE MEDICAL DEVICE SHIPPED UNDER THIS ORDER HAS BEEN INSPECTED AND TESTED AND FOUND TO CONFORM WITH THE APPLICABLE SPECIFICATIONS FORMING A PART OF DESCRIPTION SET FORTH IN ISSUING SALES ORDER/ACKNOWLEDGMENT FORM. ANY WARRANTY IS LIMITED TO THAT SHOWN ON ISSUING STANDARD ORDERING TERMS & CONDITIONS OF SALE.

John Despina  
Technical Manager

LOT NUMBER	NO. OF TESTS		NONE							
837160 ✓	0	MTN MAX	N/A N/A							
41-2F2			Cu .007 ✓	Fe .09 ✓	Si .04 ✓	Mn .07 ✓	Mo 4.6 ✓	Zn .01 ✓	Cr .07 ✓	

MAR 10 2006

A61158

CO'SYNG  
K  
MAY 1988

**MAR 10 2006**

[illegible]

WAC  
71

### CHEMICAL COMPOSITION (WT.%)

CHEMICAL COMPOSITION (WT.%)										
		Cu	Fe	Si	Mn	Mg	Zn	Cr	Others Each	Others Total
MIN					.05	4.5		.05		
MAX		.10	.40	.30	.20	4.9	.10	.20	.05	.15

**ALUMINUM REMAINDER**





# WireTech, Inc.

6440 E. Canning Street  
Los Angeles, CA 90040  
Phone (323) 722-4933  
Fax (323) 721-2738

SOLD TO

TEXTRON AEROSPACE FASTENERS  
1224 E. WARNER AVENUE  
SANTA ANA, CA 92705-5414  
USA

WORK ORDER

046206

## CERTIFICATION

HEAT NO.

SA17005

SALES ORDER / RLS

816348 / 1

ISO 9001-2000 REGISTERED



MECHANICAL TESTING  
CERT # 911.01

CERT# 911.01

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	CARRIERS	LADING NO	SHIPMENT DATE
VPO49939	M272-1040	6,182 Lbs	5	00958168	04/17/2006

SPECIFICATION C208740-101040D  
A-8740, AQ, SKFG, CHQ WIRE, SEAM & DEARB FREE, SAIP Zinc Phosphate, Lime & Stearate Coating,  
Size:0.103/0.105 Specifications: AMS2301H, AMS6322M, MIL-S-6049A, AMEND1, ASTM-A-547, AMS-S-6049-A,  
M272-1040, REV. M

### CERTIFICATION REQUIREMENTS

#### Chemical Properties

C	Si	Mn	P	S	Cu	Ni	Cr	Mo
.41	.25	.86	.010	.005	.002	.55	.50	.25

#### Physical Properties

Grain Size	Jominy 1	Jominy 2	Jominy 3	Inclusions	Macro	Cleanliness	Mill Source
8.0	J5=54	J8=52	J10=47	S2-R1-C2	GOOD	F&S=0	Dong Bu

Country of Origin  
S. Korea

#### Mechanical Properties

TEST	UNITS	Results
Tensile Strength	KSI	132.4
Yield Strength	KSI	112.8
% Elongation	%	3
% Reduction of Area	%	60.5
Rockwell Hardness C Scale	HRC	28
Decarb (Total)	In	.00

APR 17 2006



Merchandise covered by this invoice is warranted to be free from defects in workmanship or material but not for any specific length of time, type or measure of service. No claims for allowances will be recognized unless presented in writing within 10 days (time after receipt of material). Our maximum liability for any claim predicated upon defective merchandise is limited to replacement of it, or to repayment of it, or to repayment of the purchase price thereof, as we elect. Material cut to specific length or size cannot be returned for credit and request for cancellation of such orders will not be considered if manufacture has been commenced. Buyer, by acceptance of the merchandise covered by this invoice, agrees to the foregoing terms and conditions and those set forth on the reverse hereof. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal statutes including Federal law, Title 18, Chapter 47.

REPRODUCTION OF THIS CERTIFICATION IS NOT ALLOWED UNLESS IN FULL.  
Wire Tech, Inc. metallurgical laboratory is accredited in the following test: chemical analysis per ASTM E 415, mechanical testing per ASTM A 370, Rockwell hardness per ASTM E 18, metallographic mount preparation per ASTM E 3, decarburization depth per ASTM E 107, IFI 140, inclusion rating per ASTM E 45, decarburization performed as per IFI 140.  
The reported Chemical and Physical Properties are Mill Source results. Transcribed from mill certificates. HRB(H) are hardness results performed with a 1/16" steel ball. Unless otherwise specified, HRB and HRC results are conversions from ASTM A370 tables 1 and 2. \*Test result not covered by our current A2LA accreditation. Tests which have been undertaken by a subcontractor laboratory that is not accredited are not endorsed by A2LA or covered by Wire Tech, Inc. A2LA accreditation.  
TEST RESULTS RELATE ONLY TO THE ITEMS TESTED.

Material is free of mercury, radium, or alpha contamination.

gbc302 (v1.1)

page 1 of 1

Mike Martinez

QA Manager

04/17/2006

DATE





**DONGE**

**A51481**

•Head Office : D  
K  
P  
F  
•Pohang Works

WireTech  
S4100K

Packing : P.F CLOTH

[illegible]

### NON-METALLIC INCLUSIONS

[illegible][illegible]

This is to certify that the commodity mentioned hereunder has been duly inspected by our inspection department and up to the purchasers requirements.

**Manager of Quality Assurance Team**

19 - 0A - 022(312 x 203mm)

1994. 3. 1 Approval.



17200

**SPECIALTY METAL PRODUCTS**

21 Toelles Road, P. O. Box 5807

Wallingford, CT 06492-7607 U. S. A.

Telephone: 203-266-0731 Fax: 203-294-0196

**AMETEK**Certificate of ComplianceTO: TEXTRON AEROSPACE FASTENERS

## Regarding:

Your P.O Number VPO49820Our Order Number 10017979Mill Number(s) MW108754Heat Number(s) 545936Customer Part No. M-189-44  
(if applicable)Quantity (wt./pcs.) 14 REELS 185 LBS.Shipping Date 12/01/2005Spec./Dwg. # M-189 REV. R AMS5731. QQ-P-35  
(if applicable)

DEC 15 2005

We hereby certify that all items in the above shipment have been produced, inspected, and found to be in compliance with applicable drawings, referenced specifications, standards, and purchase order requirements. All documents utilized were to the revised level specified by the customer.

By: Mary Belle Klenke Title: QA Mgr.

**AMETEK**

SPECIALTY METAL PRODUCTS DIVISION

21 TOELLES ROAD, P.O. BOX 5807, WALLINGFORD, CT 06492-7607

**CERTIFICATE OF TESTS**

<b>SOLD TO:</b> TEXTRON AEROSPACE FASTEN SANTA ANA OPERATIONS PO BOX 7360 ROCKFORD IL 61126-7360		<b>SHIPPED TO:</b> TEXTRON AEROSPACE FASTEN 1214 EAST WARNER AVENUE SANTA ANA CA 92705	
<b>MATERIAL DESCRIPTION</b> A386 STAINLESS STEEL .0060 +/- .0005 X .0110 +/- .0005 X .0560 +/- .001 TEMPER ANNEALED 180-250 KNOOP SPEC NO M-189-44 REV R AMS 5731 QQ-P-35		<b>PURCHASE ORDER NO:</b> VPO49820	<b>MANUFACTURING NO:</b> MW108754
		<b>AMETEK ORDER NO:</b> 00017979	<b>ITEM NO:</b> TEX566386-01105503
		<b>SHIPPED:</b> 12/1/2005	<b>HEAT NO:</b> 545936 <b>QTY CERTIFIED:</b> 115

**CHEMICAL ANALYSIS (Wt %)**

Fe	C	Mn	P	S	Si	Al	Ni	Cr	Mo
0.17		0.0074			0.043			0.17	13.72
Co	As	Se	Ag	Cu	Zn	Al	Ni	Cr	Mo
0.12	BALANCE				0.24	1.19			
Sn	Pb	B	Bi	Sb	Te	Ge	Se	Br	I
24.32		0.017		0.0006			0.13		
Ca	Na	K	Mg	Al	Si	P	S	Cl	Br
		2.20	0.33						

**PHYSICAL PROPERTIES AS PROCESSED**

Hardness 204.0 KNP  
 Tensile Strength 103.9 KSI  
 Yield Strength  
 (at .2% offset)  
 Elongation  
 Bend Test  
 Grain Size



DEC 15 2005



AMENDED CERTIFICATION 12-14-05

*Eldrick Arnesen* 12/1/05  
 Eldrick Arnesen Date

ALL INFORMATION GIVEN AND RECOMMENDATIONS MADE HEREIN ARE BASED UPON OUR  
 RESEARCH AND ARE BELIEVED TO BE ACCURATE BUT NO GUARANTEE, EITHER EXPRESSED OR  
 IMPLIED, IS MADE WITH RESPECT THERETO OR WITH RESPECT TO THE INFRINGEMENT OF ANY  
 PATENT. OUR PRODUCTS ARE SOLD ON THE UNDERSTANDING THAT THE USER IS SOLELY  
 RESPONSIBLE FOR DETERMINING THEIR SUITABILITY FOR ANY PURPOSE. THIS INFORMATION IS  
 NOT TO BE COPIED, USED IN EVIDENCE, RELEASED FOR PUBLICATION OR PUBLIC DISTRIBUTION  
 WITHOUT WRITTEN PERMISSION FROM AMETEK, INC.

ISO 9001:2000  
 CERTIFIED



DEC-15-2005 08:12

2032940196

99%

P.02 15 02

CERTIFICATE OF TESTS ABNAHMEPRUEFZEUGNIS CERTIFICAT DE CONTROLE

CERT SERIAL# 880506774



**CARPENTER**

Carpenter Technology Corporation  
101 West Barn Street, Reading, Pa. 19601

08/01/05  
CUSTOMER / BESTELLER / CLIENT

AMETEK  
JOHN SZOSTEK  
21 TOFFEE RD  
WALLINGFORD .CT 06492

SELLER / VERKÄUFER / VENDEUR PAGE 1 OF 1

CARPENTER TECHNOLOGY CORP  
ALLENTOWN DISTRIBUTION CENTE

9754 COMMERCE CIRCLE  
KUTZTOWN PA 19530

THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.  
THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.  
MATERIAL IS MANUFACTURED FREE FROM MERCURY, CADMIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.  
THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NUMBER/NUMERO DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
36130	PHL6875 L39398	07/29/05	458.7

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE 545936

PRODUCT DESCRIPTION: CONSUMET A286 COLD FINISH ANNEALED  
TENSILE MIN 85.0 / MAX 105.0 KSI

SIZE 0.038000 IN. ( 0.96 MM) RD WIRE

PRIMARY HEAT CHEMISTRY(WTX): (TEST METHOD IS SHOWN IN PARENTHESIS)

C (OES)	MN (XRF)	SI (XRF)	P (OES)	S (OES)	CR (XRF)
0.043	0.26	0.13	0.017	0.0006	13.72
NI (XRF)	MO (XRF)	CU (XRF)	CO (XRF)	AL (OES)	TI (OES)
24.52	1.19	0.12	0.17	0.17	2.20
V (XRF)	B (OES)				
0.33	0.0074				

TENSILE AS SHIPPED. KSI(MPA) 88.0( 607)

CARPENTER'S QUALITY MANAGEMENT SYSTEM WAS REGISTERED AS OF SEPTEMBER 2, 2004 TO THE REQUIREMENTS OF ISO 9001:2000 APPROVAL CERTIFICATE 84-0540 BY PERFORMANCE REVIEW INSTITUTE. CERTIFICATE OF TEST IS PREPARED IN ACCORDANCE WITH PARAGRAPH 3.1 OF EN 10204 (DIN 50049). WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS.

IN COULEE KAY C. DANZLER  
MET RELEASE/CERT PREPARER  
CARPENTER TECHNOLOGY CORPORATION

8/1/05  
MH

1 SEM

DEC 15 2005



KCS



A50617

This certification is made to the customer printed on this form. Carpenter neither makes nor assumes responsibility for, any representation or certification to other parties.  
Die vorliegende Zertifizierung ist nur für den in diesem Formular genannten Kunden gültig. Carpenter übernimmt keine Verantwortung gegenüber Dritten hinsichtlich Haftung für die aus demselben resultierenden Ansprüche und Ansprüche Dritter.  
Ce certificat est unanime/valable pour le client dont le nom est imprimé sur ce formulaire. Carpenter n'assume pas de responsabilité pour une certification vis-à-vis d'une tierce personne.

R5642530 00100

# Wesco Aircraft Hardware Corp

Pack Slip # 1467538

27727 Avenue Scott, Valencia, CA 91355

PH: 661/776-7200 FAX: /

Packing Slip



Page No 1 of 3

Date - 9/14/2006 14:54:58

Order # 2318749 SO



**Sold To:** UFC Aerospace Corp.  
25 Drexel Drive  
Bayshore NY 11706

**Ship To:** UFC Aerospace Corp.  
25 Drexel Drive  
Bayshore NY 11706

**Ordered By:** M NAGIR

**Salesperson:** Miriam Fuster

**Acct #:** 105442 (0808)

**Customer PO#:** PUR00NDE

**Acct #:** 105442 (0808)

**Shipping Instructions:** COL

**Related SO/PO**

**Carrier:** United Parcel Service

**Payment Terms:** 030 Net 30

* * * Quantities * * *				
Itm#	Shipped   Backordered	UM	Item Number/Description	PromDt

## 1.000 30000 0 EA \*M7885/2-4-01 Cert-MfrCo/C, TR, RM, PC 9/14/2006  
\*\*\* BLINRIVMAX,PRT HD,PLATED AL/ST

S/C #	Manufacturer's Lot #:	Manufacturer Name	Lot Qty	TSO/PMA
SC#: 27924125 86642883	WAC SI 352	Cherry Aerospace LLC	461	TSO-C148
SC#: 27924123 86642882		Cherry Aerospace LLC	19200	TSO-C148
SC#: 27924125 86642883		Cherry Aerospace LLC	8739	TSO-C148
SC#: 27924123 86642882		Cherry Aerospace LLC	1600	TSO-C148

**Comments:**

DO NOT USE RPS FOR SHIPPING  
BAR CODING REQUIRED  
FOB ORIGIN  
UPS ACCT # 163502

FREIGHT ACCOUNT NUMBER: 163502

SEP 19 2006

End of Comments

Total # Boxes Total Weight



Pack Slip # 1467538

27727 Avenue Scott; Valencia, CA 91355

PH: 661 / 775-7200 FAX: /

Date - 9/14/2006 14:54:58

Page No 3 of 3

Order # 2318749 SO

Sold To: UFC Aerospace Corp.  
25 Drexel Drive  
Bayshore NY 11706

Ship To: UFC Aerospace Corp.  
25 Drexel Drive  
Bayshore NY 11706

Ordered By: M NAGIR

Payment Terms 030 Net 30

Acct #: 105442 (0808)

Customer PO#: PUR00NDE

Acct #: 105442 (0808)

Salesperson: Miriam Fuster

**Certificate of Conformance:**

Wesco Aircraft certifies that all products are of new manufacture. Documentation from the manufacturer certifies that the product meets all applicable Government, customer and/or manufacturer's specifications and requirements. Wesco certifies that the whole of the supplies detailed hereon have been received under cover of the Release Certificate quoted above and are in the same condition as when received. This documentation is maintained on file for 10 (ten) years and available upon request.

Signed:

   
Quality Assurance Department

We hereby notify you that no returns will be accepted without WESCO Returned Material Authorization number. Only lot traceable material will be accepted for return.





1224 East Warner Avenue  
Post Office Box 2157  
Santa Ana, CA 92707-0157  
USA

Page: 1



Sold-To: 15030003

Ship-To: 19000377

**SOLD TO**

WESCO JIT-LTA  
USA

SHIP TO

WESCO AIRCRAFT HDWE CORP  
27727 AVE SCOTT  
VALENCIA, CA 91355  
USA

Salesperson (s):102

**Purchase Order: 521478**

Credit Terms: 1%10, 30  
1%10, Net 30

Ship Via: P/U

FOB: Origin - Collect

Remarks:

BRITISH AEROSPACE APPROVAL# BAe/AG/30158/CAL to BAe/AG/QC/SC1 PART 3  
AIRBUS APPROVAL # 30114

11-11-11

WAC  
71

PARTS DELIVERED  
IN ACCORDANCE WITH THE  
STANDARD AMENDMENTS  
AS AGREED BY  
TAF/EADS.

## CERTIFICATION

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications. Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

**ATTENTION: PURCHASING DEPARTMENT**

**Quality Assurance Representative**

**Signed**

**SIM NGUYEN**



**CHERRY AEROSPACE LLC**1224 East Warner Avenue  
Santa Ana, CA 92707-0157**Final Inspection & Test Report**  
**CherryMax® Rivet****An ISO9001 and AS9100 registered company**

Part Numbers	Rev	Proc. Spec.	Rev
CR3213-4-01	Y	PS-CMR-3000	P

**Lot I.D. No.: 86642882****Lot Size: 35,000****MFG. Date: June 13, 2006****\*\* See 2nd Page for the Customer Parts****ASSEMBLY DATA**

TYPE	ID #	CERT #	MATERIAL	FINISH	LUBE
Rivet	86642882	A51158	QQ-A-430/5056	MIL-C-5541 CLEAR CL1A	None
Stem	86623862	A51481	AMS6322 / 8740ST	QQ-P-416/T2CL2/CAD PL	None
Collar	00000000	A50617	A-286 / AMS5731	Passivate per AMS2700	None

**W.O. #: 5231003****Final Lube: None****MECHANICAL STRENGTH TEST**

MIN REQ'D SAMPLE SIZE SPECS RESULTS	INSTALLED SHEAR		TENSION		SPINDLE RETENTION			DISASSEMBLY
					125			10
	N/A	N/A	N/A	N/A	5	8	N/A	5
	C-N-M	B	C-N-M	B	C-N-M	M	B	C-N-M
C=CR N=NAS M=MIL B=BAC LOAD VALUES IN POUND					150	193		37
					152	197		38
					152	204		31
					149	208		45
					134	210		40
						220		
						209		
						189		

**METALLURGICAL AND OTHER RELATED TESTS/REQUIREMENTS**

PCS	ITEM	STATUS	PCS	ITEM	STATUS
125	EXAMINATION	PASS	20	INSTALLATION (Min and Max Grips)	PASS
	Locking feature (missing collar/spindle)			Spindle Protrusion/Recession	
	Roundness/Concentricity			Collar Protrusion	
	Dimensional, ID Marks, Tool Marks/Nick			Blind Head Dia./Formation	
	Visual (grip/material code, ID)			Tightness in plate	
	Laps, seams, folds				

**Comments:**

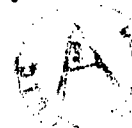
Blind Fastener



Tr. Rev: -	Q Code
Rev. Date: 6/13/2006	V09
Inspector I Reyes	TAF 313 INSP
Insp. Control #: 338171	

Cherry Aerospace LLC certifies that the product tested above conforms to the latest referenced specifications listed and that the original data are available for review upon sufficient notice. Cherry Aerospace LLC further certifies that the articles listed above have been manufactured and inspected in accordance with FAA TSO-C148. The conditions and tests required for TSO approval of this article are minimum performance standards. Aircraft fasteners approved under this TSO are not necessarily interchangeable with other aircraft fasteners approved under this TSO. Substitution of parts may only be done if acceptable to or approved by the FAA Administrator.

This test report shall not be reproduced except in full, without the written approval of the laboratory.  
The recording of false, fictitious, or fraudulent statement or entries on the certificate may be punished as a felony under Federal law.





**CERTIFIED INSPECTION REPORT AND TEST RESULTS**

**NICHOLS WIRE, INCORPORATED**

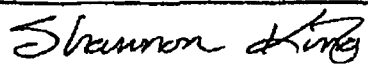
1547 Helton Drive - Florence, AL 35630

**SHIP TO:**

TEXTRON FASTENING SYSTEMS - TAF  
VMI / CONSIGNMENT AGREEMENT  
1224 EAST WARNER AVE  
SANTA ANA CA 92707-0157

**SOLD TO:**

TEXTRON FASTENING SYSTEMS - TAF  
VMI / CONSIGNMENT AGREEMENT  
1224 EAST WARNER AVE  
SANTA ANA CA 92707-0157

CUSTOMER PURCHASE ORDER NO. <b>VPO55354-1</b>			NW WORK ORDER NO. <b>95413</b>			 <b>AUTHORIZED SIGNATURE</b> <b>QUALITY CONTROL MANAGER</b>  We hereby certify that the material covered by this report has been inspected in accordance with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown on this sheet.					
DESCRIPTION <b>.123 5056 H32 STEM</b>											
FINISH											
CUSTOMER PART NO.			ALLOY <b>5056</b>		TEMPER <b>H32</b>						
NW PART NO. <b>H123A7</b>					DATE SHIPPED <b>02/24/2006</b>						
WEIGHT SHIPPED <b>2,092 lb</b>											
			ULTIMATE		YIELD		SHEAR		% ELONGATION		
LOT NUMBER		# OF TESTS	STRENGTH K.S.I.		STRENGTH K.S.I.		STRENGTH K.S.I.				
			MIN	MAX	MIN	MAX	MIN	MAX			
<b>K-837160</b>		<b>4</b>	<b>48.7</b>	<b>51.4</b>	<b>0.0</b>	<b>0.0</b>			<b>0.00</b>		

**COMMENTS:**

QQA-430

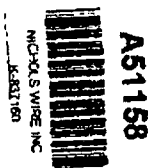
M005 .123 REV M

MILL SOURCE KAISER

MADE IN USA

K540 USED FOR 5056

**MAR 10 2006**



CHEMICAL COMPOSITION	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		OTHERS	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
	5056	0.0000	0.3000	0.0000	0.4000	0.0000	0.1000	0.0500	0.2000	4.5000	5.6000	0.0500	0.2000	0.0500	0.1500
		NICKEL		ZINC		TITANIUM									
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX		
		0.0000	0.0000	0.0000	0.1000	0.0000	0.0000								
		ALUMINUM REMAINDER													



**KAISER ALUMINUM  
& CHEMICAL CORPORATION**

**CERTIFIED TEST REPORT**

600 KAISER DRIVE HEATH, OH 43036

**SHIP TO**

NICHOLS WIRE INC.  
1547 HELTON AVE

FLORENCE

AL 35630

**SEND TO**

NICHOLS WIRE INC.  
1547 HELTON AVENUE  
ATTENTION: ANANDA SOUTH

FLORENCE

AL 35630

NICHOLS 6396 01 4000 01				MADE IN USA				
CUSTOMER PURCHASE ORDER NO. & ITEM				KASPER ORDER NO.				
11540				214460455				
ALLOY	CLAD	TEMPER	GALVE	WIDTH	LENGTH			
K540		F	.37500	00.0000	000.000			
ITEM ORDERED								
ALY-JUMBU								
CUSTOMER SPECIFICATION								
PART NUMBER				MIL NUMBER		DATE SHIPPED		
6237KH				6396		12/16/05		
WEIGHT SHIPPED		NO OF PIECES		GOVT. CONTRACT NO.				
40,670		191						
LOT NUMBER	NO. OF TESTS	NONE						
837160	0	N/A						
41-2F2		N/A						
		Cu	Fe	Si	Mn	Mg	Zn	Cr
		.007	.09	.04	.07	4.5	.01	.07

KAISER ALUMINUM & CHEMICAL CORPORATION (KASPER) HEREBY CERTIFIES TO THE BUYER THAT THE MATERIAL SHIPPED UNDER THIS ORDER HAS BEEN INSPECTED AND TESTED AND IS IN CONFORMANCE WITH THE APPLICABLE SPECIFICATIONS FOR THE MATERIAL. ANY WARRANTY IS LIMITED TO THAT SHOWN ON THE SPECIFICATION SHEET AND THE TERMS & CONDITIONS OF SALE.

John Despiro  
Technical Manager

MAR 10 2006



A51158

WAG  
T1

CHEMICAL COMPOSITION (WT.%)										
		Cu	Fe	Si	Mn	Mg	Zn	Cr	Others	Others
									Each	Total
MIN		.10	.40	.30	.05	4.5	.10	.05	.05	.15
MAX					.20	4.9		.20		
ALUMINUM REMAINDER										

08-41-0147 Rev. 07/05





# WireTech, Inc.

6440 E. Canning Street  
Los Angeles, CA 90040  
Phone (323) 722-4933  
Fax (323) 721-2738

SOLD TO

TEXTRON AEROSPACE FASTENERS  
1224 E. WARNER AVENUE  
SANTA ANA, CA 92705-5414  
USA

WORK ORDER  
046206

## CERTIFICATION

HEAT NO.  
SA17005  
SALES ORDER / RLS  
816348 / 1  
ISO 9001-2000 REGISTERED



MECHANICAL TESTING  
CERT # 911.01

CERT# 911.01

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	CARRIERS	LADING NO	SHIPMENT DATE
VPO49939	M272-1040	6,182 Lbs	5	00958168	04/17/2008

SPECIFICATION C208740-101040D  
A-8740, AQ, SKFG, CHQ WIRE, SEAM & DECARB FREE, SAIP Zinc Phosphate, Lime & Stearate Coating,  
Size:0.103/0.105 Specifications: AMS2301H, AMS6322M, MIL-S-8049A, AMEND1, ASTM-A-547, AMS-S-8049-A,  
M272-1040, REV. M

### CERTIFICATION REQUIREMENTS

#### Chemical Properties

C	Si	Mn	P	S	Cu	Ni	Cr	Mo
.41	.25	.86	.010	.005	.002	.55	.50	.25

#### Physical Properties

Grain Size	Jominy 1	Jominy 2	Jominy 3	Inclusions	Macro	Cleanliness	Mill Source
B.0	J5=54	J8=52	J10=47	S2-R1-C2	GOOD	F&S=0	Dong Bu

Country of Origin  
S. Korea

#### Mechanical Properties

TEST	UNITS	Results
Tensile Strength	KSI	132.4
Yield Strength	KSI	112.6
% Elongation	%	3
% Reduction of Area	%	60.5
Rockwell Hardness C Scale	HRC	28
Decarb (Total)	In	.00

APR 17 2008



Merchandise covered by this invoice is warranted to be free from defects in workmanship or material but not for any specific length of time, type or measure of service. No claim for allowance will be recognized unless presented in writing within 10 days (time after receipt of material). Our maximum liability for any claim predicated upon defective merchandise is limited to replacement of it, or to repayment of it, or to repayment of the purchase price thereof, as we elect. Material out to specific length or size cannot be returned for credit and request for cancellation of such orders will not be considered if manufacture has been commenced. Buyer, by acceptance of the merchandise covered by this invoice, agrees to the foregoing terms and conditions and those set forth on the reverse hereof. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal statutes including Federal law, Title 18, Chapter 47.

REPRODUCTION OF THIS CERTIFICATION IS NOT ALLOWED UNLESS IN FULL.

Wire Tech, Inc. metallurgical laboratory is accredited in the following test: chemical analysis per ASTM E 416, mechanical testing per ASTM A 370, Rockwell hardness per ASTM E 18, metallographic mount preparation per ASTM E 3, decarburization depth per ASTM E 107, IFI 140, inclusion rating per ASTM E 45, decarburization performed as per IFI 140. The reported Chemical and Physical Properties are Mill Source results. Transcribed from mill certificates. HRB(5) are hardness results performed with a 1/16" steel ball. Unless otherwise specified, HRB and HRC results are conversions from ASTM A370 tables 1 and 2. \*Test result not covered by our current A2LA accreditation. Tests which have been undertaken by a subcontractor laboratory that is not accredited are not endorsed by A2LA or covered by Wire Tech, Inc. A2LA accreditation.

TEST RESULTS RELATE ONLY TO THE ITEMS TESTED.

Material is free of mercury, radium, or alpha contamination.

gls302 (v1.1)

page 1 of 1

Mike Martinez

HS

QA Manager

04/17/2008

DATE



## viii

WireTech  
EASTON

Packing : P.P CLOTH

**F A X : 82-54-289-2145**

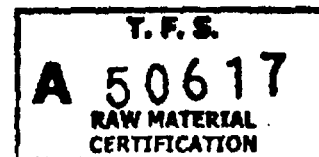
**DONGBU STEEL CO., LTD**

**SPECIALTY METAL PRODUCTS**

21 Toolies Road, P. O. Box 5807  
Wallingford, CT 06492-7807 U. S. A.  
Telephone: 203-255-8731 Fax: 203-294-0196

**AMETEK**Certificate of ComplianceTO: TEXTRON AEROSPACE FASTENERS

## Regarding:

Your P.O Number VPO49820Our Order Number 10017979Mill Number(s) MW108754Heat Number(s) 545936Customer Part No. M-189-44  
(if applicable)Quantity (wt./pcs.) 14 REELS 185 LBS.Shipping Date 12/01/2005Spec./Dwg. # M-189 REV. R AMS5731, QQ-P-35  
(if applicable)

DEC 15 2005

We hereby certify that all items in the above shipment have been produced, inspected, and found to be in compliance with applicable drawings, referenced specifications, standards, and purchase order requirements. All documents utilized were to the revised level specified by the customer.

By: Mary Belle Klempe Title: QA Mgr.

**AMETEK**

SPECIALTY METAL PRODUCTS DIVISION

21 TOELLES ROAD, P.O. BOX 5807, WALLINGFORD, CT 06492-7807

**CERTIFICATE OF TESTS**

<b>SOLD TO:</b> TEXTRON AEROSPACE FASTEN SANTA ANA OPERATIONS PO BOX 7360 ROCKFORD IL 61126-7360		<b>SHIPPED TO:</b> TEXTRON AEROSPACE FASTEN 1224 EAST WARNER AVENUE  SANTA ANA CA 92705	
<b>MATERIAL DESCRIPTION</b> A216 STAINLESS STEEL .0060 $\pm$ .0005 X .0110 $\pm$ .0005 X .0560 $\pm$ .001 TEMPER ANNEALED 180-250 KNOOP SPEC NO M-119-44 REV R AMS 5731 QQ-T-35		<b>PURCHASE ORDER NO:</b> VPO49820	<b>MANUFACTURING NO:</b> MW106754
		<b>AMETEK ORDER NO:</b> 10017979	<b>ITEM NO:</b> TEX566386-01105502
		<b>SHIPPED:</b>  12/1/2005	<b>HEAT NO:</b> 544936  <b>QTY CERTIFIED:</b> 185

**CHEMICAL ANALYSIS (Wt %)**

%AL	%AS	%C	%CR	%CU	%FE	%M	%NI	%P	%S	%SI	%Ti	%V
0.17		0.0074			0.043				0.17		13.72	
0.12	BALANCE				0.26	1.19						
24.53		0.017		0.0006			0.13					
%Ta	%Te	%Tb	%N	%W	%Zn	%Zr	%Nb	%Co	%Zr	%Ti		
		2.28	0.33									
TOTAL												

**PHYSICAL PROPERTIES AS PROCESSED**

Hardness 204.0 KNP  
 Tensile Strength 105.9 KSI  
 Yield Strength  
 (at .2% offset)  
 Elongation  
 Bend Test  
 Grain Size



DEC 15 2005



AMENDED CERTIFICATION 12-14-05

*Eldred Avenue* 12/1/05  
 Date

ALL INFORMATION GIVEN AND RECOMMENDATIONS MADE HEREIN ARE BASED UPON OUR  
 RESEARCH AND ARE BELIEVED TO BE ACCURATE BUT NO GUARANTEE, EITHER EXPRESSED OR  
 IMPLIED, IS MADE WITH RESPECT THERETO OR WITH RESPECT TO THE INFRINGEMENT OF ANY  
 PATENT. OUR PRODUCTS ARE SOLD ON THE UNDERSTANDING THAT THE USER IS SOLELY  
 RESPONSIBLE FOR DETERMINING THEIR SUITABILITY FOR ANY PURPOSE. THIS INFORMATION IS  
 NOT TO BE COPIED, USED IN EVIDENCE, RELEASED FOR PUBLICATION OR PUBLIC DISTRIBUTION  
 WITHOUT WRITTEN PERMISSION FROM AMETEK, INC.

ISO 9001:2000  
 CERTIFIED



DEC-15-2005 08:12

2832940196

99%

P.02

VT Dymax - Reflection for UNIX and OpenVMS

File Edit Connection Setup Macro Window Help

Prereceipts Entry

UFC AEROSPACE CORP.

W008\_3 MEMO

[ Receipt Information

[ Vendor Profile ]

Branch ID..NY UFC AEROSPACE

Vendor ID..W001

Receipt....PUR00NDE Purchase Order

WESCO AIRCRAFT

Rise.....00

[ Order Messages ]

Receipt Memo. 09202006

M/F MJ

KINDLY CONFIRM BY RETURN FAX/E

ATTN:MICHELLE @ 561-637-8564

MNAGIR@UFCAERO.COM

Enter a Memo Message for this Order

661, 26

VT500-7 -- 192.168.1.10 via TELNET

Num: Caps



Start



Inbox - Microsoft O...



Dymax - Reflection...





P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
30	50	EA	MS20470A5-4	71400-90	253018 P002 F001	AHG ATELIERS HAUTE-G	F0095		

  
\_\_\_\_\_  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15





# ATELIERS DE LA HAUTE-GARONNE

Ets AURIOL & Cie - S.A. au capital de 201850 EUR - Z.I. de FLOURENS BP73103 26 route de Lasbordes - 31130 FLOURENS (FRANCE)  
Tél. (33) 5 61 83 60 35 - Fax (33) 5 61 83 95 05 - RCS TOULOUSE B 550 800 528 - SIRET 550 800 528 00014 - APE 2593Z

**PACKING SLIP N° 521005**

of 5/04/2012

P/ 1

DB

Supplier number : **V1088**

Account N°: <b>3969</b>	File N°: <b>UI 10</b>	Your P.O. nbr.: <b>OANW25</b>	of <b>2/08/2011</b>
Represent.: <b>08/ MPSI</b>	Coface N° <b>285101298</b>	Our ack: <b>253018</b> of 3/08/2011	Invoice N°: <b>521005</b> of 5/04/2012
Shipment to <b>B/E AEROSPACE INC</b> <b>9835 NW 14TH ST</b> <b>(ORIGIN= FRANCE)</b>		Ordered by: <b>B/E AEROSPACE INC</b> <b>P.O. BOX 025263</b>	
<b>33172</b> <b>ETATS UNIS</b> Tél: <b>00 1</b>	<b>MIAMI</b> Fax: <b>001 305 507 7192</b>	<b>33102-5263</b> <b>ETATS UNIS</b> Tél: <b>001 305 925 2600</b>	<b>MIAMI</b> Fax: <b>001 305 507 7191</b>
Pre-carriage by : <b>UPS SCS palette &gt;300 kg Lundi</b> <b>cdessaux@ups.com</b>		Number of packaging : <b>1</b> Net weight : <b>54.887 Kg.</b> Gross weight: <b>65.000 Kg.</b>	

ITEM	ORDERED	PART NUMBER	QTY.SHIP.	SCHEDULED	TO BE DELIV.
2	125.000 Lb. 159465 Pcs**	AIRCRAFT PARTS <b>MS20470A5-4 (1)</b> 1100 no heat tr univ.head marked chamfer Alod.1200 MIL-C-5541 roll sorting NASM20470	121.000 Lb. 147290 Pcs**	04 MAY 2012	
Manufactured by AHG - NATO: F0095 - Origin: FRANCE					
Technical spec: NASM5674					
Coating per: MIL-DTL-5541 CLASS 1A					
Lot nb <b>253018 P 002 F001</b>	Qty.: <b>66.000 Lb.</b>				
Lot nb <b>253018 P 002 F002</b>	Qty.: <b>55.000 Lb.</b>				

**A-16**

**APR 24 2012**

**TRUCK**

**NP**

**7**

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172

## Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
27	100	EA	NAS388-6-8P		R35415	PILGRIM SCREW (RI)	47253		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15

# PILGRIM

## Screw Corporation

### PACKING LIST

ARIZONA - 480-917-2500

SHIPPED FROM  
259 DEXTER STREET and 120 SPRAGUE STREET  
PROVIDENCE, RI 02907

RHODE ISLAND - 401-274-4090

12/19/2014



PAC142335

BE  
BILL TO: B/E AEROSPACE  
CONSUMABLES MANAGEMENT  
MIAMI FL 33102-5263  
P.O. BOX 025263

SHIP TO: B/E AEROSPACE  
CONSUMABLES MANAGEMENT  
9835 NW 14TH STREET  
MIAMI, FL 33172

OUR ORDER #  
ORD120152

TERMS  
Net 30\*DNI\*033101490

FREIGHT SHIP VIA  
C FedEx Ground

SHIPPING DATE  
12/19/2014

CUSTOMER PO #:



9R7794

QTY	U/M	PART #	DRAWING #
5,000	EA	NAS388-6-8P 6-32 X 1/2 PH OVL STL/NI NOT BEFORE	NAS388 Revision: 1

LOT#:

r35415 QTY: 5,000.00 pc#1400  
1 CTNS, TOTAL WT. 11.00 LBS WITH 0 ON BACKORDER  
MFR C OF C  
CHEM AND PHYS  
RAW MATERIAL AND PROCESS CERTS  
QTY CODES: A, B, C, E, H, P, U, V  
QAP 33.0 REV K 05-2-2014 CLAUSE A.3 GENERAL TERMS APPLIES

PILGRIM LATEST REV: \_ PLEASE NOTIFY OF ANY NEWER REV REQUESTS

SHIPPING INSTRUCTIONS:

**\*\*NO OVERSHIPMENTS\*\***

IF UNDER 150 LBS SHIP FEDEX GROUND ACCT# 0331-0149-0 MARK:  
COLLECT

IF OVER 150 LBS, SHIP FEDEX FREIGHT ECONOMY ACCT 300176860

### CERTIFICATE OF COMPLIANCE

We hereby certify that all items delivered on this invoice comply with all applicable drawing, specification, and purchase order requirements. Evidence of such is on file for review for a minimum of 10 years. All products manufactured by Pilgrim Screw are of domestic origin and have not come in contact with mercury while in our possession. Also all special processes were performed by approved sources at the time of manufacture. Shortage claims must be made within (5) days after receipt of the goods. Quality claims must be made within (30) days after receipt of the goods. Returns will not be accepted without a 'Return Material Authorization' number. All goods returned must have the freight prepaid.

MADE IN THE USA

Page # 1

Authorized Rep.



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Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
21	10	EA	MS21075-06		58401	PAOLO ASTORI	A3856		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15

**PAOLO ASTORI SPA**

Via Mirabella, 9 - Maggiate Superiore  
28013 Gattico (NO) - ITALY  
Tel. (+39) 0322 838847  
Fax (+39) 0322 880198  
Web: www.paoloastori.com

**CERTIFICATE OF CONFORMANCE****N° 7435****Date 08/08/2014****Pag. 1 / 1****Purchased by:**

B/E AEROSPACE INC.CONSUMABLES MANAG  
10000 NW 15TH TERRACE  
MIAMI - FL  
USA

**Shipped to:**

B/E AEROSPACE INC.CONSUMABLES MANAG  
9835 NW 14TH ST.

33172 MIAMI - FL US

*This is to certify that goods listed below have been inspected in our plant and are up to your orders and to the specifications of the drawings mentioned therein.*

**Country of origin is ITALY.**

Pos.	Part Number	Purchase Order	PO Date	Quantity	U.M.	Batch #	Cure Date Expiry Date
1	MS21075-06N RELEASE W0170LZN66(Rev. REV2) - NAS1068X06L	0LZN66/3	14/12/2012	7090	N	58401	
2	MS21075-06N RELEASE W0170LZN66(Rev. REV2) - NAS1068X06L	0LZN66/3	14/12/2012	10000	N	58401	
3	MS21075-06N RELEASE W0170LZN66(Rev. REV2) - NAS1068X06L	0LZN66/3	14/12/2012	11510	N	58401	
4	MS21075-06N RELEASE W0170LZN66(Rev. REV2) - NAS1068X06L	0LZN66/3	14/12/2012	11000	N	58401	

- SUPPLIES RELEASED IN ACCORDANCE WITH REQUIREM. OF BAE/AG/SC1 PART 3- APPROVAL # BAE/AG/30631/MAA AND WITH AIRBUS SAS APPROVAL # 204788 Se sotto 150 lbs sped con fedex ground, account #0331-0149-0, mark: collect; se sopra 150 lbs sped con fedex economy, account #018757

Airbus approval # 204788 - BAE Approval # BAE/AG/30631/MAA - Complies with DFARS 252.225-7014.  
Agusta-Westland Q500 approval # A/0047

All claims regarding the parts in subject must be reported to seller promptly. Credit or replacement of parts may be limited to those parts for which traceability has been maintained by the buyer. The seller manufacturing lot identification number and return authorization (RMA) must accompany all returns. Any discrepancy claimed by the Customer must be made in writing to seller not later than ninety (90) days after the shipping date. The liability of seller on parts found to be defective is limited to replacement or rework of such goods, at seller option, and in no case is to exceed the invoice value of such goods. Under no circumstance will seller be liable for damages or cost incurred by buyer or subsequent user beyond the invoiced value of the parts in subject.



COMPANY WITH QUALITY MANAGEMENT  
SYSTEM CERTIFIED BY DIN  
= EN 9100:2003 =

Capitale Sociale € 120.000,00 int. vers.  
Cod. Fisc., Part. I.V.A. e R.I. Novara 00111940037  
R.E.A. Novara 48560 - Albo Imp-Exp NO 009081

PAOLO ASTORI SpA - Via Mirabella, 9  
28013 MAGGIATE SUP. - GATTICO (NO) - ITALY  
Tel. +39 0322 838847 - Fax +39 0322 880198  
www.paoloastori.com

## Certificate of Test

Manufacturer: Paolo Astori spa, Via Mirabella 9, 28013 Gattico (NO), ITALY

Report number : 388  
Date performed: 2014-08-05  
Inspector: DEMETRIO , DALLA GASPERINA

Procurement spec: NASM25027  
NUT, SELF-LOCKING, 250F, 450F, AND 800F

Part code: 1OAD25A067M21  
Part number: MS21075-06N  
Product standard: MS21075 NASM21075  
Revision level: NUT, SELF-LOCKING, PLATE, TWO LUG, FLOATING, REDUCED RIVET SPACING, LOW HE  
see certificate of conformity

Batch number: 58401  
Batch quantity: 49000  
Manufacturing date: 2014-07-31

Additional cross-references: MS21075-06 / NAS1068RX06L / NAS1068X06L

Customer: see certificate of conformity  
Purchase order: see certificate of conformity  
Quantity delivered: see certificate of conformity

### 1 Statement of Conformity

This is to certify that parts have been produced, controlled and quality assured according to the requirements of the applicable specification requested by the purchase order and/or the applicable standard drawing. Material, heat and surface treatments and manufacturing processes are the same as those used for the qualification approval. Samples for testing have been randomly selected from the production batch covered by this document. Country of origin is Italy. Unless otherwise stated, all special processes have been undertaken by Paolo Astori. This report shall not be reproduced except in full, without the written approval of Paolo Astori spa.

### 2 Disclaimer

All claims regarding the parts in subject must be reported to seller promptly. Credit or replacement of parts may be limited to those parts for which traceability has been maintained by the buyer. The seller's manufacturing lot identification number and return authorization (RMA) must accompany all returns. Any discrepancy claimed by the Customer must be made in writing to seller not later than ninety (90) days after the shipping date. The liability of seller on parts found to be defective is limited to replacement or rework of such goods, at seller option, and in no case is to exceed the invoiced value of such goods. Under no circumstances will seller be liable for damages or costs incurred by buyer or subsequent user beyond the invoice value of the parts in subject.

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### 3 Components and raw materials

Component name	Component batch	Material batch	Heath	Material spec
BASKET	56903	-3016	000B1567	SAE1042 (MEQU13/01C)
NUT	58400	-2997	9564	SAE1042 (MEQU13/01C)

### 4 Finishing

Component name	Process	Specification
BASKET	CAD PLATING	AMS-QQ-P-416C
NUT	CAD PLATING	AMS-QQ-P-416C

### 5 Hardness

Component name	min hardness	max hardness	avg hardness
BASKET	79.90 HR15N	80.40 HR15N	80.17 HR15N
NUT	80.90 HR15N	82.50 HR15N	81.67 HR15N

### 6 Final inspection measurements

#### 6.1 SELF LOCKING DEVICE EXAMINATION

Unit of measure: ATTR

OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK									

Number of samples tested: 32

#### 6.2 THREAD FIT

Unit of measure: ATTR

OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK	OK							

Number of samples tested: 13

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### 6.3 BEARING SURFACE SQUARENESS

Unit of measure: mm (inch)

0.05 (0.0020)	0.04 (0.0016)	0.04 (0.0016)	0.04 (0.0016)	0.03 (0.0012)	0.04 (0.0016)	0.05 (0.0020)	0.04 (0.0016)	0.04 (0.0016)	0.04 (0.0016)
0.03 (0.0012)	0.05 (0.0020)	0.04 (0.0016)							

Number of samples tested: 13

	Min	Max	Avg
Allowed:	- (-)	0.10 (0.0039)	
Found:	0.03 (0.0012)	0.05 (0.0020)	0.04 (0.0016)

### 6.4 SURFACE FINISH, PLATING OR SURFACE TREATMENT

Unit of measure: ATTR

OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK	OK							

Number of samples tested: 13

### 6.5 RIVET HOLE LOCATION AND ALIGNEMENT

Unit of measure: mm (inch)

11.10 (0.4370)	11.12 (0.4378)	11.10 (0.4370)	11.12 (0.4378)	11.11 (0.4374)
11.11 (0.4374)	11.12 (0.4378)	11.10 (0.4370)	11.11 (0.4374)	11.11 (0.4374)
11.11 (0.4374)	11.12 (0.4378)	11.12 (0.4378)		

Number of samples tested: 13

	Min	Max	Avg
Allowed:	11.05 (0.4350)	11.15 (0.4390)	
Found:	11.10 (0.4370)	11.12 (0.4378)	11.11 (0.4375)



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## 6.6 HEIGHT OF NUT

Unit of measure: mm (inch)

4.13 (0.1626)	4.05 (0.1594)	4.09 (0.1610)	4.11 (0.1618)	4.07 (0.1602)
4.08 (0.1606)	4.13 (0.1626)	4.05 (0.1594)	4.06 (0.1598)	4.08 (0.1606)
4.10 (0.1614)	4.10 (0.1614)	4.12 (0.1622)		

Number of samples tested: 13

	Min	Max	Avg
Allowed:	- (-)	4.34 (0.1709)	
Found:	4.05 (0.1594)	4.13 (0.1626)	4.09 (0.1610)

## 6.7 LOOSE OR HANGING BURRS

Unit of measure: ATTR

OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK	OK							

Number of samples tested: 13

## 6.8 ALL OTHER DIMENSIONAL CHARACTERISTICS NOT COVERED

Unit of measure: ATTR

OK	OK	OK	OK	OK
----	----	----	----	----

Number of samples tested: 5

## 6.9 AXIAL TENSILE STRENGTH

Unit of measure: N (lbf)

5950.00 (1337.6132)	5300.00 (1191.4874)	5500.00 (1236.4492)	5750.00 (1292.6514)	5650.00 (1270.1705)
5300.00 (1191.4874)	5400.00 (1213.9683)	5800.00 (1303.8919)	5900.00 (1326.3728)	5700.00 (1281.4110)

Number of samples tested: 10

	Min	Max	Avg
Allowed:	5028.00 (1130.3394)	- (-)	
Found:	5300.00 (1191.4874)	5950.00 (1337.6132)	5625.00 (1264.5503)

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## 6.10 MAX LOCKING TORQUE 1st CYCLE

Unit of measure: Nm (lbf-in)

0.54 (4.7794)	0.56 (4.9564)	0.58 (5.1334)	0.56 (4.9564)	0.52 (4.6024)	0.56 (4.9564)	0.54 (4.7794)	0.58 (5.1334)	0.56 (4.9564)	0.50 (4.4254)
------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------

Number of samples tested: 10

	Min	Max	Avg
Allowed:	- (-)	1.13 (10.0013)	
Found:	0.50 (4.4254)	0.58 (5.1334)	0.55 (4.8679)

## 6.11 MAX LOCKING TORQUE 7th CYCLE

Unit of measure: Nm (lbf-in)

0.36 (3.1863)	0.38 (3.3633)	0.40 (3.5403)	0.38 (3.3633)	0.34 (3.0093)	0.38 (3.3633)	0.36 (3.1863)	0.40 (3.5403)	0.38 (3.3633)	0.32 (2.8322)
------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------

Number of samples tested: 10

	Min	Max	Avg
Allowed:	- (-)	1.13 (10.0013)	
Found:	0.32 (2.8322)	0.40 (3.5403)	0.37 (3.2748)

## 6.12 MAX LOCKING TORQUE 15th CYCLE

Unit of measure: Nm (lbf-in)

0.24 (2.1242)	0.26 (2.3012)	0.28 (2.4782)	0.26 (2.3012)	0.22 (1.9472)	0.26 (2.3012)	0.24 (2.1242)	0.28 (2.4782)	0.26 (2.3012)	0.20 (1.7701)
------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------

Number of samples tested: 10

	Min	Max	Avg
Allowed:	- (-)	1.13 (10.0013)	
Found:	0.20 (1.7701)	0.28 (2.4782)	0.25 (2.2127)

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### 6.13 MIN.BREAKAWAY TORQUE 1st CYCLE

Unit of measure: Nm (lbf-in)

0.46	0.48	0.50	0.48	0.44	0.48	0.46	0.50	0.48	0.42
(4.0713)	(4.2484)	(4.4254)	(4.2484)	(3.8943)	(4.2484)	(4.0713)	(4.4254)	(4.2484)	(3.7173)

Number of samples tested: 10

	Min	Max	Avg
Allowed:	0.11 (1.0001)	- (-)	
Found:	0.42 (3.7173)	0.50 (4.4254)	0.47 (4.1599)

### 6.14 MIN.BREAKAWAY TORQUE 7th CYCLE

Unit of measure: Nm (lbf-in)

0.34	0.36	0.38	0.36	0.32	0.36	0.34	0.38	0.36	0.30
(3.0093)	(3.1863)	(3.3633)	(3.1863)	(2.8322)	(3.1863)	(3.0093)	(3.3633)	(3.1863)	(2.6552)

Number of samples tested: 10

	Min	Max	Avg
Allowed:	0.11 (1.0001)	- (-)	
Found:	0.30 (2.6552)	0.38 (3.3633)	0.35 (3.0978)

### 6.15 MIN.BREAKAWAY TORQUE 15th CYCLE

Unit of measure: Nm (lbf-in)

0.22	0.24	0.26	0.24	0.20	0.24	0.22	0.26	0.24	0.18
(1.9472)	(2.1242)	(2.3012)	(2.1242)	(1.7701)	(2.1242)	(1.9472)	(2.3012)	(2.1242)	(1.5931)

Number of samples tested: 10

	Min	Max	Avg
Allowed:	0.11 (1.0001)	- (-)	
Found:	0.18 (1.5931)	0.26 (2.3012)	0.23 (2.0357)

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## 6.16 TORQUE-OUT

Unit of measure: Nm (lbf-in)

3.39 (30.0040)	3.39 (30.0040)	3.39 (30.0040)	3.39 (30.0040)	3.39 (30.0040)
3.39 (30.0040)	3.39 (30.0040)	3.39 (30.0040)	3.39 (30.0040)	3.39 (30.0040)

Number of samples tested: 10

	Min	Max	Avg
Allowed:	3.39 (30.0040)	- (-)	
Found:	3.39 (30.0040)	3.39 (30.0040)	3.39 (30.0040)

## 6.17 PUSH-OUT

Unit of measure: N (lbf)

343.00 (77.1095)	304.00 (68.3419)	333.00 (74.8614)	304.00 (68.3419)	314.00 (70.5900)
343.00 (77.1095)	294.00 (66.0938)	314.00 (70.5900)	314.00 (70.5900)	324.00 (72.8381)

Number of samples tested: 10

	Min	Max	Avg
Allowed:	267.00 (60.0240)	- (-)	
Found:	294.00 (66.0938)	343.00 (77.1095)	318.70 (71.6466)

## 6.18 DISCONTINUITIES

Unit of measure: ATTR

OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK								

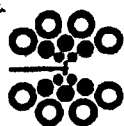
Number of samples tested: 32

## 6.19 23-HOURS STRESS EMBRITTMENT

Unit of measure: ATTR

OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
----	----	----	----	----	----	----	----	----	----

Number of samples tested: 10



**GIUSEPPE & F. LLI BONAITI S.p.A.**

NASTRO E FILO DI ACCIAIO

Sede legale e amministrativa:  
Piazza Verdi, 3/A  
23801 CALOLZIOCORTE (LC)  
tel. 0341 633080 fax 0341 633081  
internet: www.bonaitigiuseppe.it  
e-mail: info@bonaitigiuseppe.it

## CERTIFICATO DI CONTROLLO

(Tipo 3.1 secondo norma EN 10204:2004 )

Nr del  
**11902 17/12/12**

Spett.

**PAOLO ASTORI SPA**  
**VIA MIRABELLA 9**  
**28013 MAGGIATE SUPERIORE NO**

Vs. Ord. 21637 del 09/11/12

Ns. Con. 32/002122-01 del 12/11/12

DDT N. **5330** del **17.12.12**

**PRODOTTO** Cod.

**NASTRO SAE1042 MM. 18,0 X 0,60**

### RISULTATI PROVE

**FOGLIO DI LAVORAZIONE**

**FDL LA 2012 004602**

Documento N. 2441 del 10/12/12

Prova N. 001

RESISTENZA A TRAZIONE N/MM2 494

ALLUNGAMENTO % A80MM. 30,20

CARICO UNIT. SCOST. PROP. RP0.2 343,00

Prova N. 002

RESISTENZA A TRAZIONE N/MM2 511

ALLUNGAMENTO % A80MM. 27,37

CARICO UNIT. SCOST. PROP. RP0.2 345,00

**PAOLO ASTORI SPA**

**3016**

**RAW MATERIAL LOT**

Certifichiamo che il prodotto è conforme alle richieste della conferma d'ordine.

LABORATORIO PROVE

U. Dhar

### ANALISI COLATA

(Verifica effettuata dal fornitore materia prima)

**Colata 080B1567**

**L. 37894 / 004 . E**

C	Mn	Si	P	S	Al	Cr	Cu	Ni
0,446	0,670	0,260	0,011	0,001	0,028	0,220	0,012	0,042

18053 REV.2



Friedr. Gustav Theis Kalkwerkwerke GmbH Postfach 5452 58093 Hagen

PAOLO ASTORI SPA

22997

RAW MATERIAL LOT

Kunde	PAOLO ASTORI SRL	Abnahmeprüfzeugnis/Inspection certificat/Certificat de réception EN 10204 3.1
	VIA MIRABELLA, 9	Zeugnis-Nr./Certificate No./No. du certificat: Z37515
	28013 MAGGIATE SUPERIORE (	Ihre Bestell-Nr./Order-No./No de commande: N° 21292
		Unsere Kom.-Nr./Our Order No./Notre commande: Z2210093 / 1 / 1
		Datum/Date/Date: 04.02.13
		HS-Nr.: 72269200
		Alt-Kommissions-Nr.: 210093

Liefervorschrift/Specification/Spécification: Kundenspezifikation 1 13/01 rev. C of 19.02.2007, Massnorm DIN-EN-10140

Werkstoff/Quality/Nuance: C45E (Ck45) DIN-EN-10132-3

Chargen-Nr./Cast No./Coulée No.		Schmelzanalyse/Cast Analysis/Analyse de coulée(%)																										
9564		C	Si	Mn	P	S	Al	Nb	Ti	Cu	Cr	Ni	N	V	Mo	B												
Soll	min	0.4200	0.1500	0.5000			0.0100																					
	max	0.5000	0.3500	0.8000	0.0250	0.0200	0.0400																					
Ist		0.4500	0.2300	0.6900	0.0120	0.0010	0.0270				0.2100																	
Abmessung Dimension Dimension (mm)		Mechanische Werte/Mechanical Properties/Caracteristiques mécaniques																										
		Rp0.2(N/mm)		Rm(N/mm)				Dehnung A80				IE mm		Zmr %		Härte		Härte		Ra OS		Ra US		Zn OS		Zn US		-
		längs		quer		längs		quer		längs		quer																
Solllänge		Soll	Ist	Soll	Ist	Soll	Ist	Soll	Ist	Soll	Ist	Soll	Ist	Soll	Ist	Soll	Ist	Soll	Ist	Soll	Ist	Soll	Ist	Soll	Ist	Soll	Ist	
	min		347				492			25.0	26.6																	
	max	350				520																						

Metallografische Werte  
metallographic values  
valeurs métallographiques

Reinheitsgrad M0, GKZ 100 %, Entkohlung 0.000-0.010 mm

Nettogewicht/net weight/poids net 10.080,000

Lieferschein-Nr./delivery note No./Bon de livraison 342485

Bruttogewicht/gross weight/poids brut 10.200,000

Palettenzahl/number of pallets/nombre de palettes 10

Coilanzahl/number of coils/nombre de rouleaux 89

Sonstige Angaben:

THEIS Qualitätsmanagement

Abnahmebeauftragter  
Inspection representative  
Inspection responsabilité

Nina Wittmers



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXaerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
3	100	EA	CR3213-4-05		87603738	CHERRY AEROSPACE SAN	11815		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15



**CHERRY<sup>®</sup>**  
**AEROSPACE**

SPS Fastener Division, a PCC Company

Cherry Aerospace  
1224 East Warner Avenue  
Post Office Box 2157  
Santa Ana, CA 92707-0157  
USA



# PACKING LIST

Order No: SO321684

Page: 1

Order Date: 04/29/08

Print Date: 03/17/12



Sold-To: 10015341

Ship-To: 19000244

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B/E AEROSPACE  
PO BOX 025263  
MIAMI, FL 33102-5263  
USA

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B/E AEROSPACE INC C.M.  
10000 N.W. 15TH TERRACE  
MIAMI, FL 33172  
USA

Salesperson (s):110

Purchase Order: 0EZ593

Credit Terms: Net 30  
Net 30

Ship Via: YRC

FOB: Origin - Collect

## Remarks:

IF UNDER 150# SHIP FEDEX GROUND COLLECT ACCOUNT# 0331-0149-0  
IF OVER 150# SHIP FED EX NATIONAL ACCOUNT# 018757 - DO NOT INSURE  
DO NOT PREPAY AND ADD TO ANY OF THE ABOVE METHODS  
DO NOT SHIP EARLIER THAN TWO (2) WEEKS PRIOR TO DUE DATE, UNLESS SPECIFIED.

\*\*\*\*\*  
BRITISH AEROSPACE APPROVAL# BAe/AG/30158/MAA to BAe/AG/QC/SC1 PART 3  
AIRBUS APPROVAL# 30114

\*\*\*\*\*  
GOODS OF UNITED STATES ORIGIN

**TEST REPORTS ENCLOSED**

\*\*\*\*\*  
FASTENERS ECCN: 9A991d SCHEDULE B# 8803300010  
TOOLS ECCN: EAR99 SCHEDULE B# 8467290095

**DO NOT DESTROY**

Ln	Item Number	Site T LocationLot/Serial	Qty Open Qty to Ship UM	Promised Shipped
3	CR3213-4-05 Customer Item: S2906-4-5 NAS9301BNS-4-05 NAS9301B-4-05 M7885/2-4-05 * IF APPLICABLE, PART MEETS DFARS CLAUSE 252.225-7014 ALT I * PREFERENCE FOR DOMESTIC SPECIALTY METALS	1600		EA 04/15/12
		B0503 87603275	10089.0	( )
		C0103 87605571	33358.0	( )
		D0204 87604343	4900.0	( )
7	CR3213-4-05 Customer Item: S2906-4-5 NAS9301BNS-4-05	1600		EA 04/15/12

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited

## CERTIFICATION

## ATTENTION: PURCHASING DEPARTMENT

## Quality Assurance Representative

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications. Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

Signed

SIM NGUYEN





**CHERRY<sup>®</sup>**  
**AEROSPACE**

SPS Fastener Division, a PCC Company

Cherry Aerospace  
1224 East Warner Avenue  
Post Office Box 2157  
Santa Ana, CA 92707-0157  
USA



# PACKING LIST

Order No: S0321684  
Order Date: 04/29/08  
Print Date: 03/17/12

Page: 2



Sold-To: 10015341

Ship-To: 19000244

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B/E AEROSPACE  
PO BOX 025263  
MIAMI, FL 33102-5263  
USA

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B/E AEROSPACE INC C.M.  
10000 N.W. 15TH TERRACE  
MIAMI, FL 33172  
USA

Ln	Item Number	Site T Location Lot/Serial	Qty Open Qty to Ship	UM	Promised Shipped
----	-------------	-------------------------------	-------------------------	----	---------------------

7

CR3213-4-05  
NAS9301B-4-05  
M7885/2-4-05

\* IF APPLICABLE, PART MEETS DFARS CLAUSE 252.225-7014 ALT I  
\* PREFERENCE FOR DOMESTIC SPECIALTY METALS



D0204 87604343

6945.0 ( )



E0304 87603737

34100.0 ( )



EZLINE-2 87605573

34763.0 ( )



F0203 87603738

33970.0 ( )



F0904 87604344

34535.0 ( )



K0504 87603274

34500.0 ( )

8

CR3213-4-05

1600

EA

04/15/12

Customer Item: S2906-4-5

NAS9301BNS-4-05

NAS9301B-4-05

M7885/2-4-05

\* IF APPLICABLE, PART MEETS DFARS CLAUSE 252.225-7014 ALT I

\* PREFERENCE FOR DOMESTIC SPECIALTY METALS



A0404 87504499

34387.0 ( )



A0704 87605572

34440.0 ( )



A0903 87606808

34400.0 ( )



EZLINE-2 87606809

11553.0 ( )



F0204 87606811

33800.0 ( )



H1002 87605973

31420.0 ( )

**Test Reports Enclosed  
Do Not Destroy**

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited

## CERTIFICATION

## ATTENTION: PURCHASING DEPARTMENT

## Quality Assurance Representative

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications. Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

Signed

**SIM NGUYEN**

*[Signature]*

**CHERRY AEROSPACE**

SPS Fastener Division, a PCC Company



Accredited

Chemical Processing

Heat Treating

ISO/IEC 17025

Material Testing Lab

1224 East Warner Avenue  
Santa Ana, CA 92707-0157**Final Inspection & Test Report**  
**CherryMax® Rivet****An ISO9001 and AS9100 registered company. OASIS #6111041606**

Part Numbers	Rev	Proc. Spec.	Rev	<b>Lot I.D. No.:</b> 87603738  <b>Lot Size:</b> 35,000  <b>MFG. Date:</b> January 20, 2012
CR3213PR-4-05	AB	PS-CMR-3000	R	
CR3213-4-05	AB	PS-CMR-3000	R	
** See 2nd Page for the Customer Parts				

**ASSEMBLY DATA**

TYPE	ID #	CERT #	MATERIAL	FINISH	LUBE
Rivet	87577257	A68097	QQ-A-430/5056	MIL-C-5541 CLEAR CL1A	None
Stem	87577218	A68653	AMS6322 / 8740ST	QQ-P-416/T2CL2/CAD PL	None
Collar	00000000	A69297	A-286 / AMS5731	Passivate per AMS2700	None

W.O. #: 5464545

Final Lube: None

**QUALITY CONFORMANCE/ACCEPTANCE RESULTS**

MIN REQ'D SAMPLE SIZE SPECS	INSTALLED SHEAR		TENSION		SPINDLE RETENTION		DISASSEMBLY
	664		285		125		10
	8	N/A	8	N/A	8	N/A	5
	C-N-M	B	C-N-M	B	C-N-M	B	C-N-M
RESULTS	988		353		240		31
	1004		363		262		62
	1013		361		230		100
	1025		370		236		28
	1019		341		228		37
C=CR N=NAS	1014		339		232		
M=MIL B=BAC	1032		355		228		
LOAD VALUES	1044		371		231		
IN POUND							

PCS.	ITEM	STATUS	PCS.	ITEM	STATUS
20	EXAMINATION	PASS	20	INSTALLATION (Min and Max Grips)	PASS

**Comments:**

Blind Fastener

Tr. Rev: -

Rev. Date: 1/20/2012

Inspector

I Reyes

Q Code

V09



The parts contained in this shipment have been manufactured and inspected in accordance with TSO-C148. The conditions and tests required for TSO approval of this article are minimum performance standards. Aircraft fasteners approved under this TSO are not necessarily interchangeable with other aircraft fasteners approved under this TSO. Fasteners of similar dimensional properties may have widely varying performance and metallurgical properties. Substitution of parts may only be done if acceptable to or approved by the Administrator.

This test report shall not be reproduced except in full, without the written approval of the laboratory.  
The recording of false, fictitious, or fraudulent statement or entries on the certificate may be punished as a felony under Federal law.

## KAISER ALUMINUM

SHIP TO:

**CHERRY AEROSPACE LLC**

## VMI / CONSIGNMENT AGREEMENT

1224 EAST WARNER AVE

SANTA ANA, CA 92705-5414


**SOLD TO:**

**CHERRY AEROSPACE LLC**

# VMI / CONSIGNMENT AGREEMENT

1224 EAST WARNER AVE

SANTA ANA, CA 92705-5414

Customer PO Number VP126153 ,		NW WORK ORDER NO. 04266	 <b>AUTHORIZED SIGNATURE QUALITY CONTROL MANAGER</b>
DESCRIPTION .123 5056 H32 STEM			
CUSTOMER PART NO.	ALLOY 5056	TEMPER H32	We hereby certify that the material covered by this report has been inspected in accordance with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown on this sheet.
NW PART NO. H123A7		DATE SHIPPED 8/20/2011	
WEIGHT SHIPPED <del>1.237</del> 1.161			

9/24/11

		ULTIMATE		YIELD		% ELONGATION	
LOT NUMBER	# OF TESTS	STRENGTH K.S.I.		STRENGTH K.S.I.			
		Min	Max	Min	Max		
K847412	2	48.65	48.90				

M005.123 REV R '

QQA-430C

**MILL SOURCE KAISER**

**MADE IN USA**

SEP 21 2011



K847412



A68097

CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		OTHERS	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
	5056		0.30		0.40		0.10	0.05	0.20	4.50	5.60	0.05	0.20	0.05	0.15
		NICKEL		ZINC		TITANIUM		LEAD		BISMUTH					
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
					0.10										
ALUMINUM REMAINDER															

# **KAISER ALUMINUM**

**FABRICATED PRODUCTS**

Kaiser Aluminum & Chemical  
600 Kaiser Drive  
Heath, OH 43056-1088  
740-522-1151

*Best in Class*

Revised Certification  
**CERTIFIED TEST REPORT**  
<http://Certs.KaiserAluminum.com>

## **Specifications**

QQA-430 REV C

## **Miscellaneous Notes**

Made in USA

Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. Actual (Act) chemical composition is from representative samples taken during the ingot casting process. Independent chemical analysis will vary from these values because of natural variation in the process and testing error. This test report shall not be reproduced, except in full, without the written approval of Kaiser Aluminum. The recording of false, fictitious, or fraudulent statements or entries on the certificate may be punished as a felony under federal law. Chemical analysis performed in accordance with ASTM E 1251-07. The Newark facility is AS9100B:2004 approved. The Newark Laboratory is NADCAP approved for chemical testing (OES).

Kaiser Aluminum Fabricated-  
K&A 7412



A68097

SEP 21 2011



## **CERTIFICATION**

Kaiser Aluminum & Chemical Corp Inc. ("Kaiser") hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales order acknowledgement form. Any warranty is limited to that shown on Kaiser's standard general terms and conditions.

Warren Marcucci, Technical Manager

*Warren Marcucci*

Plant Serial: 18462

Kaiser Order Number: 624533840

Page 2 of 2

Line Item: 1



**WireTech, Inc.**

6440 E. Canning Street  
Los Angeles, CA 90040  
Phone (323) 722-4933  
Fax (323) 721-2738

SOLD TO

**CHERRY AEROSPACE LLC**  
1224 E. WARNER AVENUE  
SANTA ANA, CA 92705-5414  
USA

# CERTIFICATION

WORK ORDER  
**085677**

HEAT NO.  
20151170  
SALES ORDER / RLS  
**841037 / 1**  
ISO 9001-2000 REGISTERED



MECHANICAL TESTING  
CERT # 911.01

CERT# 911.01

CUSTOMER P.O. <b>VPO92778</b>	CUSTOMER PART <b>M272.1040</b>	QUANTITY <b>6,995 Lbs</b>	CARRIERS <b>5</b>	LADING NO <b>00093282</b>	SHIPMENT DATE <b>11/01/2011</b>			
<p>SPECIFICATION <b>C208740-101040A</b>  <b>A-8740, AQ, SKFG, CHQ WIRE, SEAM &amp; DEARB FREE, SAIP Zinc Phosphate, Lime &amp; Stearate Coating,</b>  <b>Size:0.103/0.105 Specifications: AMS2301K, AMS6322N, MIL-S-6049A, AMEND1, ASTM-A-547, AMS-S-6049-A, M</b>  <b>272.1040 REV. R</b></p>								
CERTIFICATION REQUIREMENTS								
Chemical Properties								
C	Si	Mn	P	S	Cu	Ni	Cr	Mo
.39	.24	.85	.011	.002	.08	.44	.56	.21
Physical Properties								
Grain Size Jominy 1	Jominy 2	Jominy 3	Inclusions Macro	Cleanliness	Mill Source			
6 J5=54	J8=47	J10=44	S2-R1-C2	GOOD	F&S=0	Charter		
Country of Origin								
USA - DFAR Compliant								
Mechanical Properties								
TEST	UNITS					Results		
Tensile Strength	KSI					133.1		
Yield Strength	KSI					113.1		
% Elongation	%					9		
% Reduction of Area	%					63.0		
Rockwell Hardness C Scale	HRC					29		
Decarb (Total)	In					0.00		

NOV 04 2011

303 AUDIT

Merchandise covered by this invoice is warranted to be free from defects in workmanship or material but not for any specific length of time, type or measure of service. No claim for allowance will be recognized unless presented in writing within 10 days time after receipt of material. Our maximum liability for any claim predicated upon defective merchandise is limited to replacement of it, or to repayment of it, or to repayment of the purchase price thereof, as we elect. Material cut to specific length or size cannot be returned for credit and request for cancellation of such orders will not be considered if manufacture has been commenced. Buyer, by acceptance of the merchandise covered by this invoice, agrees to the foregoing terms and conditions and those set forth on the reverse hereof. "The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal statutes including Federal law, Title 18, Chapter 47."

REPRODUCTION OF THIS CERTIFICATION IS NOT ALLOWED UNLESS IN FULL.

Wire Tech, Inc. metallurgical laboratory is accredited in the following test: chemical analysis per ASTM E 415, mechanical testing per ASTM A 370, Rockwell hardness per ASTM E 18, metallographic mount preparation per ASTM E 3, decarburization depth per ASTM E 1077, IFI 140, inclusion rating per ASTM E 45, decarburization performed as per IFI 140. The reported Chemical and Physical Properties are Melt Source results. Transcribed from mill certificates. HRB(W) are hardness results performed with a 1/16" carbide ball. Unless otherwise specified, HRB and HRC results are conversions from ASTM A370 tables 1 and 2. \*Test result not covered by our current A2LA accreditation. Tests which have been undertaken by a subcontractor laboratory that is not accredited are not endorsed by A2LA or covered by Wire Tech, Inc. A2LA accreditation.

TEST RESULTS RELATE ONLY TO THE ITEMS TESTED.

DFAR Material per Clauses 252.225-7014 ALT. 1, 252.225-7009, & 225.003(9)

"LATEST REVISIONS OF ASTM"

Material is free of mercury, radium, or alpha contamination.

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled, and processed in the United States meeting DFAR's compliance.
2. Mercury was not used during the manufacture of this product, nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	CSSM	Charter Steel Melting Division	1653 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSSR/CSSP	Charter Steel Rolling/Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	CSFP	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSCM/CSCR	Charter Steel Cleveland	4300 E. 49th St., Cuyahoga Heights, OH 44125-1004
.	.	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Specification	CSSM	CSSR/CSSP	CSFP	CSCM/CSCR
Chemistry Analysis	ASTM E415; ASTM E1019	X			X
Macroetch	ASTM E381	X			X
Hardenability (Jominy)	ASTM A255; SAE J406; JIS G0561	X			X
Grain Size	ASTM E112	X	X	X	X
Tensile Test	ASTM E8; ASTM A370		X	X	X
Rockwell Hardness	ASTM E18; ASTM A370	X	X	X	X
Microstructure (spheroidization)	ASTM A892		X	X	
Inclusion Content (Methods A, E)	ASTM E45		X		X
Decarburization	ASTM E1077		X	X	X

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/13.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgement (designated by our Sales Order number) to the customer's purchase order. Both order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.

NOV 04 2011



WFA/ech-  
2011170

# Certificate of Analysis

Radcliff Wire Inc. 97 Ronzo Rd., P.O. Box 603, Bristol, CT 06010

Date Shipped: 1/3/2012

PO #: VP125694

Qty. Shipped: 114 LBS-10 BLACK  
MIG SPOOLS

Radcliff No.: 122793

Heat No.: Z3003MK11

Customer: CHERRY AEROSPACE  
SANTA ANA OPERATIONS  
1224 EAST WARNER AVE  
SANTA ANA, CA 92705-5414

Country of Origin: USA

Original Mill Source: USA

Size: .006 X .011 X .056 \*\*\*

Material: A286 Stainless Steel

Description: SPECIAL SHAPE

Specification: AMS 5731 REV L, AMS 5737 REV P  
CHEM ONLY

## Notes:

DFAR COMPLIANT  
CONSIGNMENT ORDER  
PART# M189.44 REV W  
NET WGT 114 LBS



JAN 17 2012



## Chemical Properties

Al: 0.2%	B: 0.007%	Bi: 0.00001%	C: 0.04%	Co: 0.07%
Cr: 14.43%	Cu: 0.16%	Fe: 58.51%	Mn: 0.1%	Mo: 1.27%
Ni: 24.66%	P: 0.009%	Pb: <0.0001%	S: 0.002%	Si: 0.17%
Ti: 2.07%	V: 0.3%			

Tensile: 93 KSI

Rockwell:

Certs/Material

**Lisa Platek**

Certification Clerk

The material as shipped is free from mercury contamination

**HUNTINGTON ALLOYS CORPORATION**  
**A Special Metals Company**

NOTE: THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTE.

OTHER DIRECT-NOT ASSIGNABLE TO DI D

HUNTINGTON, WEST VIRGINIA 25705-1771

A-1 WIRE TECH 840 AIRPORT DR ROCKFORD, IL 61109		<b>CERTIFIED MATERIAL TEST REPORT</b>		<b>No. 17320</b>	
HA ORDER NO./ITEM 300023059 1		DATE 06/23/11		PAGE OF 1 3	
QUANTITY 9438 LBS		INSPECTED BY HA/SMC			
CHARGE ORDER NO. 29968-1		MARK ORDER NO. 29968-1			
DESCRIPTION OF MATERIAL SHIPPED INCOLOY ALLOY A-286 3120 IN COIL		HR ROD - COIL PKL ANN			

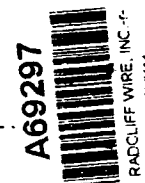
THIS IS TO CERTIFY THAT ALL REQUIRED SAMPLINGS INSPECTIONS AND TESTS HAVE BEEN PERFORMED IN ACCORDANCE WITH THE ORDER AND SPECIFICATION REQUIREMENTS. THE TEST REPORT REPRESENTS THE ACTUAL ATTRIBUTES OF THE MATERIAL FURNISHED AND THE VALUES SHOWN ARE CORRECT AND TRUE. THE MATERIAL DESCRIBED BY THIS CERTIFICATE IS IN FULL COMPLIANCE WITH ALL ORDER AND INSPECTION REQUIREMENTS. WE HEREBY CERTIFY THAT THE BELOW FIGURES ARE IN ACCORDANCE WITH THE SPECIFIED CONTRACT REQUIREMENTS.

REV. 8/08

\*\*\*\*\*THIS REPORT RELATES ONLY TO THE ITEM(S) TESTED AND MAY NOT BE REPRODUCED EXCEPT IN FULL.\*\*\*\*\*

SPECIFICATIONS: A-1 A286 RESTRICTED FOR CUST 187, 1250, 211 REV 2-25-10\ UNS: S66286  
 SAE AMS 5731L CHEM ONLY\SAE AMS 5732J CHEM ONLY\  
 SAE AMS 5734K CHEM ONLY\SAE AMS 5737N CHEM ONLY\  
 SAE AMS 5726D CHEM ONLY\GE C50TF35-S4 AM 7 CLASS A CHEM ONLY\  
 SPS-M-118 REV L CHEM ONLY\GE S-400 (10-10-2008)\  
 GE S-1000 (3-2-2010)\  
 HEAT TREAT & STRESS RUPTURE CAPABILITY TESTING\  
 QUALITY SYSTEM CERTIFICATION: ISO 9001:2008 (ABS-QE CERT. 30125);  
 EN 10 204/DIN 50049 (TYPE 3.1)

JAN 17 2012



CHEMICAL ANALYSIS (WT. %)									
HEAT#	C	MN	FE	S	SI	CU	NI	CR	AL
	TI	CO	MO	P	B	PB/PPM	BI/PPM	V	
23003MK	0.04	0.10	56.51	0.002	0.17	0.16	24.66	14.43	0.20
	2.07	0.07	1.27	0.009	0.007	<0.1	<0.1	0.30	

COUNTRY OF ORIGIN: MELTED AND MANUFACTURED IN THE USA  
 TO CONVERT PPM TO WT.%, MOVE DECIMAL POINT FOUR PLACES TO THE LEFT.  
 MELT METHOD: VIM + ELECTROSLAG REMELTED

MECHANICAL PROPERTIES									
HEAT/LOT	QUANTITY	HARDNESS	GRAIN SIZE	YIELD STRENGTH X 100 X 100	TENSILE PSI	ELONGATION X 100	R/A	DEG	
							X	F	
23003MK									
ROOM TEMP-	-CAPABILITY **			1043	1577	26.1	46.4		HEAT TREAT #1
ROOM TEMP-	-CAPABILITY **			0988	1547	27.4	51.0		HEAT TREAT #2
HARDNESS -HRC	-CAPABILITY	28.5							HEAT TREAT #1
HARDNESS -HRC	-CAPABILITY	27.7							HEAT TREAT #2



HUNTINGTON ALLOYS CORPORATION  
A Special Metals Company

NOTE: THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT  
STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE  
AS A FELONY UNDER FEDERAL STATUTE.

OTHER DIRECT-NOT ASSIGNABLE TO DI D

HUNTINGTON, WEST VIRGINIA 25705-1771

CERTIFIED MATERIAL TEST REPORT No. 17320

HA ORDER NO./ITEM	DATE	PAGE	OF
300023059 1	06/23/11	3	3

QUANTITY	INSPECTED BY
9438 LBS	HA/SMC

CHARGE ORDER NO.	MARK ORDER NO.
29968-1	29968-1

DESCRIPTION OF MATERIAL SHIPPED	INCOLOY ALLOY A-286	HR ROD - COIL PRL ANN
	3120 IN COIL	COIL

THIS IS TO CERTIFY THAT ALL REQUIRED SAMPLINGS INSPECTIONS  
AND TESTS HAVE BEEN PERFORMED IN ACCORDANCE WITH THE  
ORDER AND SPECIFICATION REQUIREMENTS. THE TEST REPORT  
REPRESENTS THE ACTUAL ATTRIBUTES OF THE MATERIAL  
FURNISHED AND THE VALUES SHOWN ARE CORRECT AND TRUE.  
THE MATERIAL DESCRIBED BY THIS CERTIFICATE IS IN FULL  
COMPLIANCE WITH ALL ORDER AND INSPECTION REQUIREMENTS.  
WE HEREBY CERTIFY THAT THE BELOW FIGURES ARE IN  
ACCORDANCE WITH THE SPECIFIED CONTRACT REQUIREMENTS.

REV. 808

ANNEX 1, CHAPTER 4.3 PER ABS GROUP LTD CERTIFICATE 41734 (EXPIRES JULY 31, 2011)."

HUNTINGTON ALLOYS CORPORATION IS AN ACCREDITED INDEPENDENT NADCAP MATERIALS TESTING LABORATORY VIA CERTIFICATE NUMBER 127805 (EXPIRES APRIL 30, 2013) FOR ALL TESTING SPECIFIED IN THE SCOPE OF ACCREDITATION.

MATERIAL PRODUCED UNDER QA SYSTEM DOCUMENTED IN HUNTINGTON ALLOYS CORP QA MANUAL REV. 49, DATED 2/17/2011

AUTHORIZED QUALITY CERTIFICATION REPRESENTATIVES :  
W. E. BOLEN, M. A. MORRISON, D. K. MILLER

CERTIFIED TESTING LABORATORY DATA SOURCE IAI  
AEBG VENDOR NO. 47150  
M.R.B. CASE RECORD NO.: NONE  
AUTHORIZED VENDOR SIGNATURE  
DATE: 06/23/11

JAN 17 2012



A69297



RADCLIFF WIRE, INC.-F  
Z303MK11

**HUNTINGTON ALLOYS CORPORATION**  
**A Special Metals Company**

HUNTINGTON, WEST VIRGINIA 25705-1771

NOTE: THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTE.

OTHER DIRECT-NOT ASSIGNABLE TO DI D

**CERTIFIED MATERIAL TEST REPORT**

**No. 17320**

THIS IS TO CERTIFY THAT ALL REQUIRED SAMPLINGS INSPECTIONS AND TESTS HAVE BEEN PERFORMED IN ACCORDANCE WITH THE ORDER AND SPECIFICATION REQUIREMENTS. THE TEST REPORT REPRESENTS THE ACTUAL ATTRIBUTES OF THE MATERIAL FURNISHED AND THE VALUES SHOWN ARE CORRECT AND TRUE. THE MATERIAL DESCRIBED BY THIS CERTIFICATE IS IN FULL COMPLIANCE WITH ALL ORDER AND INSPECTION REQUIREMENTS. WE HEREBY CERTIFY THAT THE BELOW FIGURES ARE IN ACCORDANCE WITH THE SPECIFIED CONTRACT REQUIREMENTS.

REV. 8/08

A-1 WIRE TECH  
840 AIRPORT DR  
ROCKFORD, IL 61109

HA ORDER NO./ITEM 300023059 1	DATE 06/23/11	PAGE 2	OF 3
QUANTITY 9438 LBS	INSPECTED BY HA/SMC		
CHARGE ORDER NO. 29968-1	MARK ORDER NO. 29968-1		

A-1 WIRE TECH  
C/O SMC ACCOUNTS PAYABLE  
1401 BURRIS ROAD  
NEWTON, NC 28658

DESCRIPTION OF MATERIAL SHIPPED  
INCOLOY ALLOY A-286 HR ROD - COIL PKL ANN  
.3120 IN COIL COIL

STRESS RUPTURE-CAPABILITY 1200 DEG F/ 75,000 PSI STRESS/ 057.8 HRS / 7.4%EL IN 4D /11.1%RA/  
STRESS WAS INCREASED PER SPECIFICATION OPTION TO INDUCE EARLY FRACTURE

STRESS RUPTURE SPECIMEN DIAMETER - .250"

HEAT TREAT #2

STRESS RUPTURE-CAPABILITY 1200 DEG F/ 75,000 PSI STRESS/ 038.7 HRS / 18.3%EL IN 4D /31.4%RA/

STRESS RUPTURE SPECIMEN DIAMETER - .250"

HEAT TREAT #1

Z3003MK 11 11 PCS  
ROOM TEMP-HRB -AS SHIPPED \*\*\* 68.4 0309 0855 50.5 78.5  
GRAIN SIZE-AS SHIPPED AGS ASTM NO. 7.  
NORMAL - TRAN  
\*\* TENSILE SPECIMEN GAUGE LENGTH - 4 X DIAMETER  
\*\*\* TENSILE SPECIMEN GAUGE LENGTH - 01.500

JAN 17 2012

YIELD STRENGTH WAS DETERMINED USING A STRESS STRAIN CURVE

NO WELDING OR WELD REPAIR WAS PERFORMED.

CAPABILITY HEAT TREAT #1: SOL TREAT AT 1650 DEG. F. FOR 30 MINUTES. WATER QUENCHED. AGED 1325 DEG. F. FOR 16 HOURS. AIR COOLED.

CAPABILITY HEAT TREAT #2: SOL TREAT AT 1800 DEG. F. FOR 30 MINUTES. WATER QUENCHED. AGED 1325 DEG. F. FOR 16 HOURS. AIR COOLED.

VISUAL AND DIMENSIONAL EXAMINATION SATISFACTORY.  
MATERIAL, WHEN SHIPPED, IS FREE FROM CONTAMINATION BY MERCURY, RADIUM, ALPHA SOURCE, & LOW MELTING ELEMENTS.

"CHEMICAL ANALYSIS AS REQUIRED FOR CARBON,SULFUR,NITROGEN OR OXYGEN IS PERFORMED BY COMBUSTION TECHNIQUES.  
ALL OTHER REPORTED ELEMENTS ARE ANALYZED BY X-RAY AND/OR EMISSION SPECTROSCOPY."

"QUALITY SYSTEM MEETS REQUIREMENTS OF DIRECTIVE 97/23/EC (PRESSURE EQUIPMENT DIRECTIVE),

A69297



RADCLIFF WIRE, INC. 7-  
Z3003MK11

# A-1 Wire Tech, Inc.

4550 Kishwaukee Street  
Rockford, Illinois 61109

## Certified Material Test Report

Load ID. 00082926

HEAT/LOT

Z3003MK11

SOLD TO

Page 1

Radcliff Wire  
97 Ronzo Road  
Bristol, CT 06011-0603  
USA

SALES ORDER  
103494 / 1

Date Printed 07/20/2011

CUSTOMER P.O. 43421	CUSTOMER PART JOB# 1282011	QUANTITY 207.00	PIECES 2	SHIPMENT DATE 07/20/2011						
PRODUCT: Alloy: A286 Diameter: .034" Temper: 1/8 Hard Finish: . 7662861-034-50-ST										
CERTIFICATION REQUIREMENTS										
*As Shipped Properties										
TEST *Tensile	UNITS ksi	RESULTS 110								
Chemical Analysis %										
C	Mn	Si	P	S	Cr	Ni	Co	Ti	V	Fe
.04	.10	.17	.009	.002	14.43	24.66	.07	2.07	.30	56.51
Cu	Mo	B	Al	Pb	Bi					
.16	1.27	.007	.20	<.1 PPM	.00001					
Specifications										
*Melt Source DFARS COMPLIANT / MELT SOURCE: HUNTINGTON ALLOYS / COUNTRY OF ORIGIN: USA / MFG: USA										
Specification:										
JAN 17 2012										
End of Certification										



Visual and dimensional examination  
Satisfactory  
Material, when shipped is free from  
contamination by mercury, radium,  
alpha source, and low melting  
point elements.

This is to certify that all required samplings, inspections, operations and tests  
performed by A-1 Wire Tech, Inc. and its subcontractors are in accordance with the  
specification requirements. The test report represents the actual attributes of the  
material furnished and the values shown are correct and accurate. The material  
described by this certificate is in full compliance with all order and inspection  
requirements. We hereby certify that the above data are in accordance with the  
specification requirements.

*Suzanne Mullins*

Suzanne Mullins  
Quality Assurance Manager

CHARTER  
STEEL

**CHARTER  
STEEL**

A Division of  
Charter Manufacturing Company, Inc.

EMAIL

1658 Cold Springs Road  
Saukville, Wisconsin 53080

(262) 268-2400

1-800-437-8789

FAX (262) 268-2570

**CHARTER STEEL TEST REPORT**  
**Reverse Has Text And Codes**

Wiretech Incorporated  
6440 East Canning Street  
Attn: Andre Stephan  
Los Angeles, CA-90040

Cust P.O.	6703-1
Customer Part #	8740C1A060-C
Charter Sales Order	60612
Heat #	20151170
Ship Lot #	4089167
Grade	8740 R SK FG AQ 1/4
Process	HRSA
Finish Size	1/4

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies these requirements.

Test Results of Heat Lot# 20151170											
Lab Code: 125544	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
CHEM	.39	.85	.011	.002	.24	.44	.56	.21	.08	.008	.003
%Wt											
	AL	N	B	TI	NB						
	.030	.0070	.0006	.002	.001						
JOMINY(HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM12
	56	56	56	56	54	51	49	47	46	44	41
	JOM14	JOM16	JOM18	JOM20	JOM24	JOM28	JOM32				
	39	37	36	35	33	31	29				

JOMINY SAMPLE TYPE ENGLISH = C  
MACRO ETCH SURFACE = 1 MACRO ETCH RANDOM = 1 MACRO ETCH CENTER = 1  
AMS 2301 FREQUENCY AVERAGE = .00 AMS 2301 FREQUENCY INDIVIDUAL = .00  
AMS 2301 SEVERITY AVERAGE = .00 AMS 2301 SEVERITY INDIVIDUAL = .00  
CHEM. DEVIATION EXT. - GREEN =

NOV 04 2011



REDUCTION RATIO = 998:1

Test Results of Processing Lot# 4089111, 4089167						TENSILE LAB = 0358-02 RA LAB = 0358-02
	# of Tests	Min Value	Max Value	Mean Value		
TENSILE	2.0	76.7	82.3	79.5		
REDUCTION OF AREA	2	70	71	70		

NUM DECARB = 2 FREE FERRITE DECARB = .000 FREE FERR & PARTIAL DECARB = .001  
CP SPHERO % LAB = 0358-02 NUM SPHERO = 2 SPHERODIZATION = 80.0

Specifications: Manufactured per Charter Steel Quality Manual Rev 9,08-01-09  
Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = AMS6322N/AMS2301K/COP3010M/BS2S147:1976 CHEM ONLY Revision = Dated =

Additional Comments:

Charter Steel  
Cuyahoga Heights, OH, USA



Page 1 of 1

Rem: Load1, Fax0, Mail0

This MTR supersedes all previously dated MTRs for this order

Janice Barnard  
Manager of Quality Assurance  
07/26/2011

# KAISER ALUMINUM FABRICATED PRODUCTS

*Best in Class*

Revised Certification  
**CERTIFIED TEST REPORT**  
<http://Certs.KaiserAluminum.com>

Kaiser Aluminum & Chemical  
600 Kaiser Drive  
Heath, OH 43056-1088  
740-522-1151

CUSTOMER PO NUMBER: FLO-1100		CUSTOMER PART NUMBER: 6Z37KH		PRODUCT DESCRIPTION: ALY-JUMBO	
KAISER ORDER NUMBER: 624533840	LINE ITEM: 1	SHIP DATE: 08/02/2011	ALLOY: K540	TEMPER: F	
WEIGHT SHIPPED: 19582 lbs.	QUANTITY: 90 pcs.	B/L NUMBER: 9922	DIAM/DAF/THKNS: 0.375 in.	WIDTH: 0.000 in.	LENGTH: 0.0 in.
SHIP TO:  FLORENCE 1547 HELTON DRIVE FLORENCE, AL 35630			SOLD TO:  FLORENCE 1547 HELTON DRIVE FLORENCE, AL 35630		

Test Code: 4000

## Actual Physical Properties

Lot No.

847412 0.0

## Chemical Composition, WT. % (Aluminum Remainder)

Lot		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
Cast/Drop									
ChemID									
847412									
22-2F2	Act.	0.04	0.09	0.01	0.08	4.7	0.08	0.02	0.01
163126									
Chemical	Min				0.05	4.5	0.05		
Limits	Max	0.30	0.40	0.10	0.20	4.9	0.20	0.10	0.05
	Others	Each	0.05	Max		Total	0.15	Max	

SEP 21 2011  
322  
AUDIT



A68097

## CERTIFICATION

Kaiser Aluminum & Chemical Corp Inc. ("Kaiser") hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales order acknowledgement form. Any warranty is limited to that shown on Kaiser's standard general terms and conditions.

Warren Marcucci, Technical Manager

*Warren Marcucci*

Plant Serial: 18462

Kaiser Order Number: 624533840

Page 1 of 2

Line Item: 1



**CHERRY<sup>®</sup> AEROSPACE**  
SPS Trustmark Division, a PCC Company

1224 East Warner Avenue  
Santa Ana, CA 92707-0157



Chemical Processing  
Heat Treating  
ISO/IEC 17025  
Material Testing Lab

## Final Inspection & Test Report CherryMax<sup>®</sup> Rivet

An ISO9001 and AS9100 registered company. OASIS #6111041606

Lot I.D. No.:	87603738
Rev:	-

### Customer Parts List

<u>Customer Part Number</u>	<u>Rev</u>	<u>Proc. Spec.</u>	<u>Rev</u>
NAS9301BNS-4-05	5	NAS1686	3
M7885/2-4-05	D2	MIL-R-7885	D2
NAS9301B-4-05	5	NAS1686	3
S2906-4-5	B	MIL-R-7885	D2
S2906-4-5	B	NAS1686	3
S2906-4-5	B	PS-CMR-3000	R



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
12	300	EA	MS20600AD4W5		87961961	CHERRY AEROSPACE SAN	11815		

  
\_\_\_\_\_  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15



**CHERRY®**  
AEROSPACE  
SPS Fastener Division, a PCC Company

Cherry Aerospace  
1224 East Warner Avenue  
Post Office Box 2157  
Santa Ana, CA 92707-0157  
USA



# PACKING LIST

Order No: S0382902  
Order Date: 04/04/14  
Print Date: 08/07/14

Page: 1



Sold-To: 10015341

S O L D T O	B/E AEROSPACE
	PO BOX 025263
	MIAMI, FL 33102-5263
	USA

Ship-To: 10043053

S H I P T O	B/E AEROSPACE INC,
	CONSUMABLES MANAGEMENT
	9835 NW 14TH ST
	MIAMI, FL 33172
	USA

Salesperson (s):110

Credit Terms: NET 30  
Net 30

Purchase Order: 0XJS59

Ship Via: FED EX NATIONAL CL

FOB: Origin - Collect

## Remarks:

IF UNDER 150# SHIP FEDEX GROUND COLLECT ACCOUNT# 0331-0149-0  
IF OVER 150# SHIP FED EX NATIONAL ACCOUNT# 018757 - DO NOT INSURE  
DO NOT PREPAY AND ADD TO ANY OF THE ABOVE METHODS  
DO NOT SHIP EARLIER THAN TWO (2) WEEKS PRIOR TO DUE DATE, UNLESS SPECIFIED.

\*\*\*\*\*  
BRITISH AEROSPACE APPROVAL# BAe/AG/30158/MAA to BAe/AG/QC/SC1 PART 3  
AIRBUS APPROVAL# 30114  
\*\*\*\*\*

GOODS OF UNITED STATES ORIGIN  
\*\*\*\*\*

ECCN: EAR99  
\*\*\*\*\*

\*IF APPLICABLE, PART MEETS DFARS CLAUSE 252.225-7009 ALT I  
\*PREFERENCE FOR DOMESTIC SPECIALTY METALS  
\*\*\*\*\*

RELEASE# WW1D0XJS59  
\*\*\*\*\*

Unless otherwise specified on this order, Cherry will manufacture and certify parts to the part number's latest revision. Latest revisions are shown at <https://bizpartner.cherryaerospace.com/partrevisions.htm> under "Part Number Revision List".  
\*\*\*\*\*

INCORRECT AND UNAVAILABLE PART NUMBERS WILL BE LINED OUT ON PO  
CHERRY AEROSPACE DOES NOT ACCEPT CLAUSE V IN REGARDS TO ISO17025- CHERRY  
IS COMPLIANT TO NADCAP REQUIREMENTS ONLY

**TEST REPORTS ENCLOSED**

**DO NOT DESTROY**

Ln	Item Number	Site T LocationLot/Serial	Qty Open Qty to Ship UM	Promised Shipped	
1	CR9163-4-05	1600	EA	09/18/14	

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited

## CERTIFICATION

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications, Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

## ATTENTION: PURCHASING DEPARTMENT

Quality Assurance Representative

Signed

SIM NGUYEN





**CHERRY®**  
**AEROSPACE**

SPS Fastener Division, a PCC Company

Cherry Aerospace  
1224 East Warner Avenue  
Post Office Box 2157  
Santa Ana, CA 92707-0157  
USA



## PACKING LIST

Order No: S0382902  
Order Date: 04/04/14  
Print Date: 08/07/14

Page: 2 ✓

Sold-To: 10015341



Ship-To: 10043053

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B/E AEROSPACE  
PO BOX 025263  
MIAMI, FL 33102-5263  
USA

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B/E AEROSPACE INC,  
CONSUMABLES MANAGEMENT  
9835 NW 14TH ST  
MIAMI, FL 33172  
USA

Ln	Item Number	Site T Location Lot/Serial	Qty Open Qty to Ship	UM	Promised Shipped
----	-------------	-------------------------------	-------------------------	----	---------------------

1

CR9163-4-05

Customer Item: MS20600AD4W5



G0306 87961961

20100.0

( )



**TEST REPORTS ENCLOSED**  
**DO NOT DESTROY**

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited

#### CERTIFICATION

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications. Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

#### ATTENTION: PURCHASING DEPARTMENT

Quality Assurance Representative

Signed

SIM NGUYEN

**CHERRY** AEROSPACE

SPS Fastener Division, a PCC Company

1224 East Warner Avenue  
Santa Ana, CA 92707-0157Chemical Processing  
Heat Treating  
ISO/IEC 17025  
Material Testing Lab**Final Inspection & Test Report**  
**Cherry® Rivet****An ISO9001 and AS9100 registered company. OASIS #6111041606**

Part Numbers	Rev	Proc. Spec.	Rev	Lot I.D. No.:	87961961
CR9163-4-05	J	MIL-R-7885	D2	Lot Size:	28,000
				MFG. Date:	August 06, 2014

**ASSEMBLY DATA**

TYPE	ID #	CERT #	MATERIAL	FINISH	LUBE
Rivet	87961961	A74728	2117 ALUM ALLOY	MIL-C-5541	Par-90
Stem	87961964	A74848	2017 ALUM ALLOY	MIL-C-5541	Par-90

W.O. #: 5551336

Final Lube: None

**QUALITY CONFORMANCE/ACCEPTANCE RESULTS**

MIN REQ'D SAMPLE SIZE SPECS	INSTALLED SHEAR		SPINDLE RETENSION	
	370		15	
	9		9	
RESULTS	519	525	62	67
	522		60	
	525		68	
	520		64	
	520		64	
	523		59	
	521		60	
LOAD VALUES IN POUNDS	520		70	

PCS.	ITEM	STATUS	PCS.	ITEM	STATUS
20	EXAMINATION	PASS	13	INSTALLATION (Min and Max Grips)	PASS

**Comments:**

Blind Fastener

Tr. Rev.: 1  
Rev. Date: 8/8/2014Inspector  
V Iriarte

Insp. Control #:

The parts contained in this shipment have been manufactured and inspected in accordance with TSO-C148. The conditions and tests required for TSO approval of this article are minimum performance standards. Aircraft fasteners approved under this TSO are not necessarily interchangeable with other aircraft fasteners approved under this TSO. Fasteners of similar dimensional properties may have widely varying performance and metallurgical properties. Substitution of parts may only be done if acceptable to or approved by the Administrator.

This test report shall not be reproduced except in full, without the written approval of the laboratory.  
The recording of false, fictitious, or fraudulent statement or entries on the certificate may be punished as a felony under Federal law.

# BENEKE

## Product Certification And Testing Report

Customer:  
CHERRY AEROSPACE LLC  
ATTN: ACCTS. PAYABLE  
1224 EAST WARNER AVENUE  
P.O. BOX 2157

SANTA ANA CA 92707-0157

Date >> 4/15/2014

Customer PO No.	BWC Lot No.	Date Shipped
PO164101	25886	4/15/2014
Cust Item ID : M262.1230		

BWC Item No.  
2H1230813041A01

Description:  
.123" DIA. + - .0005" 4F 2117 - H13  
#4 FINISH, ALUMINUM COLD HEADING WIRE X 22"  
BLOCKWOUND 100# COILS.

Specifications:

CUST SPEC	M-262	REV. F
FED SPEC	QQ-A-430	REV. C

Chemical Limits

Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
2117	.8	.7	2.2 - 3.0	.20	.20 - .50	.10	.25	

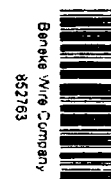
Others Each	Others Total	Aluminum Remainder
.05	.15	

Test Results

Case No.	lbs	Diameter (in)	Tensile (psi)	Yield (psi)	Peak Load (lbs)	Grain Size EL %
41874-1	224	0.1230	29,930.0		355.6	

Total Weight: 224

APR 24 2014



A74728

Beneke Wire Company

WE CERTIFY THAT SAMPLES REPRESENTING THE MATERIAL COVERED IN THIS REPORT HAVE BEEN INSPECTED AND FOUND TO MEET THE COMPOSITION LIMITS AND MECHANICAL PROPERTIES SHOWN ABOVE. ANY WARRANTY IS LIMITED TO THAT SHOWN ON BENEKE WIRE COMPANY'S STANDARD TERMS AND CONDITIONS OF SALE.

Authorized  
Signature

Shannon King, Plant Metallurgist

5540 National Turnpike

Louisville, KY 40214

Phone: (502) 367-6434

# **KAISER ALUMINUM**

**FABRICATED PRODUCTS**

*Best in Class*

## **CERTIFIED TEST REPORT**

<http://Online.KaiserAluminum.com>

Kaiser Aluminum Fabricated Products, LLC  
600 Kaiser Drive  
Heath, OH 43056-1088  
740-522-1151

### **Miscellaneous Notes**

Made in USA

Chemical exceptions Fe 0.30-0.7 Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. Actual (Act) chemical composition is from representative samples taken during the ingot casting process. Independent chemical analysis will vary from these values because of natural variation in the process and testing error. This test report shall not be reproduced, except in full, without the written approval of Kaiser Aluminum. The recording of false, fictitious, or fraudulent statements or entries on the certificate may be punished as a felony under federal law. Chemical analysis performed in accordance with ASTM E 1251-11. The Newark facility is AS9100C:2009 approved. The Newark Laboratory is NADCAP approved for chemical testing (OES).

The products you inquired and ordered are not governed by any applicable industry standard or custom specifications. They are produced, tested and released as such. By placing an order, you acknowledge and accept the full responsibility and liability for their fitness for the intended end use or end uses.

### **CERTIFICATION**

Kaiser Aluminum Fabricated Products, LLP ("Kaiser") hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales order acknowledgement form. Any warranty is limited to that shown on Kaiser's standard general terms and conditions.

Steven J. Tua, Technical Manager



APR 24 2014



Plant Serial: 35516  
Kaiser Order Number: 172560092  
Line Item: 1

# BENEKE

## Product Certification And Testing Report

Customer:  
CHERRY AEROSPACE LLC  
ATTN: ACCTS. PAYABLE  
1224 EAST WARNER AVENUE  
P.O. BOX 2157  
SANTA ANA CA 92707-0157

Date >> 5/5/2014

Customer PO No.	BWC Lot No.	Date Shipped:
PO164957 ✓	26036	5/5/2014
Cust Item ID : M051.0980		

BWC Item No.  
2F09808T3741A01

Description:  
.098" DIA. +- .0005" 4F 2017 - T37  
#4 FINISH, ALUMINUM COLD HEADING WIRE X 22"  
BLOCKWOUND 100# COILS.

### Specifications:

CUST SPEC M-51 REV. L -  
FED SPEC QQ-A-430 ✓ REV. C

### Test Results

Chemical Limits											Test Results									
Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others Each	Others Total	Aluminum Remainder	Case No.	lbs	Diameter (in)	Tensile (psi)	Yield (psi)	Peak Load (lbs)	EL %	Grain Size	
2017	.20 - .8	-.7	3.5 - 4.5	.40 - 1.0	.40 - .8	-.10	-.25	-.15	.05	.15										
852736 ✓	.36 ✓	.29 ✓	3.7 ✓	.61 ✓	.60 ✓	.02 ✓	.18 ✓	.02 ✓				42062-1	371	0.0983	68,040.0 ✓		517.0			
Total Weight:													371							

A74848



Beneke Wire Company  
852736

MAY 14 2014



### Beneke Wire Company

WE CERTIFY THAT SAMPLES REPRESENTING THE MATERIAL COVERED IN THIS REPORT HAVE BEEN INSPECTED AND FOUND TO MEET THE COMPOSITION LIMITS AND MECHANICAL PROPERTIES SHOWN ABOVE. ANY WARRANTY IS LIMITED TO THAT SHOWN ON BENEKE WIRE COMPANY'S STANDARD TERMS AND CONDITIONS OF SALE.

5540 National Turnpike

Louisville, KY 40214

Authorized  
Signature

*Shannon King*

Shannon King, Plant Metallurgist

Phone: (502) 367-6434



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
22	2000	EA	NAS1149C0332R		C134126-02-1	SUPERIOR WASHER AND	4WUG7		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15

ORDER NUMBER: C134126-02

**SUPERIOR WASHER AND GASKET CORP.**

170 Adams Avenue, P.O. Box 5407  
 Hauppauge, New York 11788  
 PHONE: (631) 273-8282  
 FAX: (631) 273-8088

**SUPERIOR WASHER AND GASKET CORP.**

170 Adams Avenue, P.O. Box 5407  
 Hauppauge, New York 11788  
 PHONE: (631) 273-8282  
 FAX: (631) 273-8088

S ACCT NO. 6170  
 O B/E AEROSPACE  
 L P.O. BOX 025263  
 D

T MIAMI FL 33102  
 O

S ACCT NO. 6170  
 H B/E AEROSPACE  
 I 9835 NW 14TH STREET  
 P

T MIAMI FL 33172  
 O

PURCHASE ORDER NUMBER ORTB74-02		TERMS 1% 10 NET 90	F.O.B. ORIGIN	DST	VO
SPECIAL INSTRUCTIONS >150#FEDXFRT ECONO /NOOVR/UNDR					
QUANTITY ORD	DESCRIPTION		CITY, STATE	UNIT	
1. 1000000	NAS1149C0332R REV 5--AN960-C10L REV21 301/302/304 A AMS5901,5516,5513 PASSIVATE AMS2700 METHOD 1 TYPE 6 CLASS 1 .438 X .203 X .032 +.020-.005 +- .010 +- .004 SPECIAL CHARGES: DUAL DFAR CERT SPECIAL CHARGES: PLATING CERT SHIPPING DATES: 09/02/13		1000000	23CTWS 1061# .00 .00	
PAGE : 1					

**CERTIFICATION OF COMPLIANCE**

WE CERTIFY THAT THE ABOVE MATERIAL IS MANUFACTURED IN THE U.S.A. AND CONFORMS TO THE SPECIFICATIONS INDICATED IN DRAWINGS AND SPECIFICATIONS ON SAID PURCHASE ORDER AND PARTS ARE MERCURY FREE.

By Richard Anderson  
 QUALITY CONTROL MANAGER

Roy Metal Finishing Co., Inc.

Tel: 1-864-277-0420

Fax: 1-864-277-8698

CONESTEE



# 775516

**Superior Washer & Gasket ( SWG )**

TEL : (803) 366-3250

Entered 9/17/2013

**Part No AMS2700 METHOD 1 ( .438X.206X.033 )**



**Plating AMS 2700 METHOD 1  
PASSIVATION**

Rec Ticket No.

Certs

Machine

Cust PO No. c134126-02-1

**YES**

NO

**PASS**

Lot No.

Machine Cycle

900

Container(s)

2 BARRELS

**GENERIC PART**

Unit

POUND

Quantity

1,091



**Instructions:**

Customer Production:

All METAL barrels, PASSIVATE orders, and black jobs must be lined with plastic bags - see your supervisor for bags!!!

**WO Memo**

**Post Plating Operations If Applicable:**

Bake Trays:

**Rework:**

Plating Out		Oven				Bake Oven #	
Out Time	Initial	In Time	Initial	Out Time	Initial	Chromate Initials	Post Dip Initials
AM PM		AM PM		AM PM			

Machine

Problem

Cause

W/OID / Receiving	Loading	Unloading	Packaging	Quality	Ship Prep
	70	05			

Date Printed:

9/17/2013 1:39:13 PM

*This Certification ensures that the plating thickness and chromate finish is in accordance with the finish requirement stated above*

Certified By :

Date :

9/18/13



ORDER NUMBER: C134126-02

**SUPERIOR WASHER AND GASKET CORP.**

170 Adams Avenue, P.O. Box 5407  
 Hauppauge, New York 11788  
 PHONE: (631) 273-8282  
 FAX: (631) 273-8088

**SUPERIOR WASHER AND GASKET CORP.**

170 Adams Avenue, P.O. Box 5407  
 Hauppauge, New York 11788  
 PHONE: (631) 273-8282  
 FAX: (631) 273-8088

S ACCT NO. 6170  
 O B/E AEROSPACE  
 L  
 D P.O. BOX 025263

T MIAMI FL 33102  
 O

S ACCT NO. 6170  
 H B/E AEROSPACE  
 I  
 P 9835 NW 14TH STREET

T MIAMI FL 33172  
 O

PURCHASE ORDER NUMBER ORTB74-02		TERMS 1% 10 NET 90	F.O.B. ORIGIN	DST	VO
SPECIAL INSTRUCTIONS >150#FEDXFRT ECONO /NOOVR/UNDR					
QUANTITY ORD.	DESCRIPTION		QTY. ORDERED	AMOUNT	
1. 1000000	NAS1149C0332R REV 5--AN960-C10L REV21 301/302/304 A AMS5901,5516,5513 PASSIVATE AMS2700 METHOD 1 TYPE 6 CLASS 1 .438 X .203 X .032 +.020-.005 +-.010 +-.004 SPECIAL CHARGES: DUAL DFAR CERT SPECIAL CHARGES: PLATING CERT SHIPPING DATES: 09/02/13		1000000 <i>230TWS</i> <i>1061#</i>	.00 .00	
PAGE : 1					

**CERTIFICATION OF COMPLIANCE**

WE CERTIFY THAT THE ABOVE MATERIAL IS MANUFACTURED IN THE U.S.A. AND CONFORMS TO THE SPECIFICATIONS INDICATED IN DRAWINGS AND SPECIFICATIONS ON SAID PURCHASE ORDER AND PARTS ARE MERCURY FREE.

By

*Richard Anderson*  
 QUALITY CONTROL MANAGER

Roy Metal Finishing Co., Inc.

Tel: 1-864-277-0420

Fax: 1-864-277-8698

CONESTEE



# 775516

**Superior Washer & Gasket ( SWG )**

TEL : (803) 366-3250

Entered 9/17/2013

<b>Part No</b>	<b>AMS2700 METHOD 1 ( .438X.206X.033 )</b>

<b>Plating</b>	<b>AMS 2700 METHOD 1 PASSIVATION</b>
----------------	--

<b>Rec Ticket No.</b>		<b>Certs</b>	<b>Machine</b>
<b>Cust PO No.</b>	c134126-02-1	<b>YES</b> <b>NO</b>	<b>PASS</b>
<b>Lot No.</b>			

<b>Machine Cycle</b>	900	<b>Container(s)</b>	2 BARRELS	
<b>GENERIC PART</b>			<b>Unit</b>	POUND
			<b>Quantity</b>	1,091

**Instructions:**

Customer Production:

All METAL barrels, PASSIVATE orders, and black jobs must be lined with plastic bags - see your supervisor for bags!!!

**WO Memo**

<b>Post Plating Operations If Applicable:</b>						<b>Bake Trays:</b>		<b>Rework:</b>
<b>Plating Out</b>		<b>Oven</b>				<b>Bake Oven #</b>		Machine Problem Cause
<b>Out Time</b>	<b>Initial</b>	<b>In Time</b>	<b>Initial</b>	<b>Out Time</b>	<b>Initial</b>	<b>Chromate Initials</b>	<b>Post Dip Initials</b>	
AM PM		AM PM		AM PM				
<b>W/OID / Receiving</b>	<b>Loading</b>	<b>Unloading</b>	<b>Packaging</b>	<b>Quality</b>	<b>Ship Prep</b>			
	70	05						

Date Printed:

9/17/2013 1:39:13 PM

This Certification ensures that the plating thickness and chromate finish is in accordance with the finish requirement stated above.

Certified By :

Date : 9/18/13

**SUPERIOR WASHER AND GASKET CORP.**

170 Adams Avenue  
Hauppauge, New York 11788  
Phone: (631) 273-8282  
Fax: (631) 273-8088  
E-Mail: swg@superiorwasher.com  
Web: superiorwasher.com  
(In the East)

**SUPERIOR WASHER AND GASKET CORP.**

662 Bryant Blvd.  
Rock Hill, South Carolina 29732  
Phone: (803) 366-3250  
Fax: (803) 366-3511  
E-Mail: swg@superiorwasher.com  
Web: superiorwasher.com  
(In the South)

B/E AEROSPACE  
P.O. BOX 025263

MIAMI, FL 33102

Customer Purchase Order Number ORTB74-02		Superior Order Number C134126-02-1	Superior Lot Number C134126-02 - 1	Tracer No. SC34601 -1
Date 09-18-13	Production Card 511175	Part Number NAS1149C0332R		Quantity 1,000,000
Drawing REV 5--AN960-C10L REV21		Dual Cert No. AN960-C10L REV21		

We hereby certify that all materials and processes conform  
to the required drawing specifications and that the parts  
have been melted and manufactured in the U.S.A.  
and comply with DFARS 252.225.7014 ALT 1  
All parts are manufactured in a Mercury-free environment

**Material**

304 STAINLESS STEEL Annealed per AMS5513F

PASSIVATE AMS2700 METHOD 1 TYPE 6 CLASS 1

**Chemical Analysis**

C	CARBON	.0207
Mn	MANGANESE	1.7710
P	PHOSPHORUS	.0340
S	SULPHUR	.0010
Si	SILICON	.2445
Cr	CHROMIUM	18.0630
Ni	NICKEL	8.0155
Mo	MOLYBDENUM	.4010
Cu	COPPER	.3900
Fe	IRON	
Ti	TITANIUM	
Co	COBALT	
N	NITROGEN	.0718
Cb	COLUMBIUM	
Al	ALUMINUM	
Sn	TIN	
Mg	MAGNESIUM	
Zn	ZINC	
Pb	LEAD	
Va	VANADIUM	

**Mechanical Properties**

Yield	54020
Tensile	99570
Elongation	48.1
Hardness	B 86.0
Heat	H4L9
Magnetic	
Permeability	<2.0
Bend Test	OK

SUPERIOR WASHER & GASKET CORP.

By 

Richard Anderson, Jr.  
Quality Control Manager



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
29	150	EA	D5-PFSC35-38A-HF	PFSC35-38A	0001270591	SOUTHCO CONCORDVILLE	94222		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15

**Certificate of Conformity**  
(Manufacturing Responsibility/Quality Management System Approvals)

Customer Purchase Order Number  
OZZ3T84

Southco Customer Order Number  
508631

Shipped Date  
08Jan15

Shipped To Customer  
KLX Aerospace Solutions  
9835 NW 14th Street  
MIAMI FL 33172  
USA

Contract Part No.	Rev.	Southco Part No	Rev.	Part Description	Lot Number	Lot Quantity
PFSC35-38A, S10015-2		D5-PFSC35-38A-HF		DZUS® Panel, Stud Assy Cad Clr	0001270591	5,570.00

Quality Management System Registrations
<p>Audit Body: BVC ISO / TS16949 Cert No: USA-11381/2-TS</p> <p>ISO 9001: 2008 Cert No: US 10000019</p> <p>ISO 14001 Cert No: US003361-1</p> <p>AS9100-B: US003276-1</p>

Packing List Number
81876636

Manufacturing Responsibility
<p>Southco, Inc. 250 East Street HONEOYE FALLS NY 14472 USA</p>

Certified that, unless otherwise stated above, the enclosed products have been manufactured, inspected and tested in accordance with the requirements of the applicable Contract or Purchase Order and conform in all material respects to the published specification(s)/drawing(s) specific to the referenced part number.

Name: Terry Graham  
Title / Position: SENIOR QUALITY ENGINEER  
Date of Signature: 08Jan15

Signature:

*Terry Graham*



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


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**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
18	500	EA	MS21042L5		51693	ALCOA FASTENING/REPU	52828		

  
\_\_\_\_\_  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15

# Alcoa Fastening Systems



Shipper ID: 894595

Page: 1

Sold To: 5574  
B/E AEROSPACE, INC.  
ATTN: ACCOUNTS PAYABLE  
P.O. BOX 025263  
MIAMI, FL 33102-5263  
USA

Ship To: 55740014  
B/E AEROSPACE CONSUMABLES  
9835 NW 14TH ST  
MIAMI, FL 33172  
USA

Shipped From:  
ALCOA FASTENING SYSTEMS  
AEROSPACE PRODUCTS  
NEWBURY PARK, REPUBLIC OPERATIONS  
1300 Rancho Conejo Blvd  
Newbury Park, CA 91320  
TEL: (805) 262-4200

Ship Date: 09/10/14  
Print Date: 09/10/14  
Time: 10:18:13

Ship Via: FED EX OVERNIGHT  
INC Terms: FCA NEWBURY PARK

Container/Weight:  
Carrier Shipment Ref: 894595  
Bill Lading #:

SHIP VIA : FED EX OVERNIGHT

BUYER: ROHAN JOHNSON PHONE:

MATERIAL COMPLIES WITH DFARS 252.225-7009 PREFERENCE FOR DOMESTIC SPECIALTY METALS" WITH ITS ALTERNATE 1.

\*\*\*SHIP VIA FEDX AIR COLLECT ACCT# 0331-0149-0 IF 150 LBS OR MORE SHIP FED

EX FREIGHT ECONOLY COLLECT ACCT# 018757 \*\*\*

DO NOT SHIP BY ANY OTHER WITHOUT PROPER WRITTEN AUTHORIZATION.

ALLOWABLE SHIPPING TOLERANCE = +0%-0%.

\*\* BAR CODE PER QAP 33 CLAUSE P REQUIRED \*\*

\*\* QAP 33.0 REV G CLAUSES: A,A.1,B,C,E,H,P,U,V. CLAUSE A.3 GENERAL TERMS APPLIES.

\*\*\*REV. LATEST

RELEASE # W0190MMR88

03/18/14 ADDED TO THE MILESTONE UPDATED TO SHIP OVERNIGHT-AA

02/20/14 PER MILESTONE CALL MYRRA AND MARIA OK TO SPLIT ORDER FROM REPUBLIC

TO FULLERTON SO# F497806 BE WANTS TO TAKE 7,350 PCS IN STOCK FROM FULLERTON

NEW SALES ORDER WAS CREATED FOR FULLERTON STOCK-AA

05/12/14 ADDED TO THE MILESTONE UPDATED TO SHIP OVERNIGHT-AA

Sales Order: F454386 Order Date: 01/24/13 Purchase Order: OMMR88

Remarks: CONNIE

Ln	Item Number	Description	Rev	Qty Shipped	Qty B/O	UM
5	RH30A5	Hex Nut, 8740, TSO-C148		59120.0	0.0	EA *
Low Height, Lightweight						
Cust Line #: 5						
Customer Item: MS21042L5						

## CERTIFICATE OF CONFORMANCE

This is to certify that all items noted above were produced in conformance with the contract, drawing specifications, and other applicable documents. All required process certifications, chemicals and physical test reports are on file subject to examination. This document must not be reproduced except in full and relates only to the items tested.

Name

A.F.S. Republic

Signature

ALCOA GLOBAL FASTENERS, INC.

ALL CLAIMS REGARDING THIS ORDER MUST BE REPORTED TO SELLER PROMPTLY. CLAIMS FOR CREDIT OR REPLACEMENT OF PARTS MAY BE LIMITED TO THOSE PARTS FOR WHICH TRACEABILITY HAS BEEN MAINTAINED BY THE BUYER. THE SELLER'S MANUFACTURING LOT IDENTIFICATION NUMBER AND RETURN MERCHANDISE AUTHORIZATION (RMA) NUMBER MUST ACCOMPANY ALL RETURNS. ANY CLAIM BASED ON AN ALLEGED DISCREPANCY IN QUANTITY, QUALITY, ETC. BETWEEN THE GOODS ACTUALLY SHIPPED AND/OR DELIVERED UNDER THESE DOCUMENTS AND THE DESCRIPTION THEREOF IN THESE DOCUMENTS, MUST BE MADE IN WRITING TO SELLER NOT LATER THAN NINETY (90) DAYS AFTER THE SHIPPING DATE APPEARING HEREON.

CUSTOMER'S COPY

# Alcoa Fastening Systems



Shipper ID: 894595

Page: 2

Sold To: 5574  
B/E AEROSPACE, INC.  
ATTN: ACCOUNTS PAYABLE  
P.O. BOX 025263  
MIAMI, FL 33102-5263  
USA

Ship To: 55740014  
B/E AEROSPACE CONSUMABLES  
9835 NW 14TH ST  
MIAMI, FL 33172  
USA

Shipped From:  
ALCOA FASTENING SYSTEMS  
AEROSPACE PRODUCTS  
NEWBURY PARK, REPUBLIC OPERATIONS  
1300 Rancho Conejo Blvd  
Newbury Park, CA 91320  
TEL: (805) 262-4200

Ship Date: 09/10/14  
Print Date: 09/10/14  
Time: 10:18:13

Ship Via: FED EX OVERNIGHT  
INCO Terms: FCA NEWBURY PARK

Container/Weight:  
Carrier Shipment Ref: 894595  
Bill Lading #:

Ln Item Number Lot/Serial

5 RH30A5 \*\*\* Cont \*\*\*

Ln Item Number Description Rev Qty Shipped Qty B/O UM

Required Date: 02/14/14 Promised Date: 02/21/14

DUAL CERT TO: NAS1291-5\*\*\*

MFG C OF C CHEM & PHYS TEST REPORT REQ

Loc/Lot: f-2030 51693 59,120.00 COO: mx

HTS CODE: 7318160085

SCHEDULE-B NUMBER: 7318160000 ECCN: 9A991

The export classification appears above. You are responsible for all related export license requirements.

6 RH30A5 Hex Nut, 8740, TSO-C148 100000.0 0.0 EA \*

Low Height, Lightweight

Cust Line #: 6

Customer Item: MS21042L5

Required Date: 03/14/14 Promised Date: 03/21/14

\*\*\*DUAL CERT TO: NAS1291-5\*\*\*

MFG C OF C CHEM & PHYS TEST REPORT REQ

Loc/Lot: f-2030 51693 100,000.00 COO: mx

HTS CODE: 7318160085

SCHEDULE-B NUMBER: 7318160000 ECCN: 9A991

The export classification appears above. You are responsible for all related

## CERTIFICATE OF CONFORMANCE

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Name

A.F.S. Republic

Signature

ALCOA GLOBAL FASTENERS, INC.

ALL CLAIMS REGARDING THIS ORDER MUST BE REPORTED TO SELLER PROMPTLY. CLAIMS FOR CREDIT OR REPLACEMENT OF PARTS MAY BE LIMITED TO THOSE PARTS FOR WHICH TRACEABILITY HAS BEEN MAINTAINED BY THE BUYER. THE SELLER'S MANUFACTURING LOT IDENTIFICATION NUMBER AND RETURN MERCHANDISE AUTHORIZATION (RMA) NUMBER MUST ACCOMPANY ALL RETURNS. ANY CLAIM BASED ON AN ALLEGED DISCREPANCY IN QUANTITY, QUALITY, ETC. BETWEEN THE GOODS ACTUALLY SHIPPED AND/OR DELIVERED UNDER THESE DOCUMENTS AND THE DESCRIPTION THEREOF IN THESE DOCUMENTS, MUST BE MADE IN WRITING TO SELLER NOT LATER THAN NINETY (90) DAYS AFTER THE SHIPPING DATE APPEARING HEREON.

CUSTOMER'S COPY



# Alcoa Fastening Systems



Shipper ID: 894595

Page: 3

Sold To: 5574  
B/E AEROSPACE, INC.  
ATTN: ACCOUNTS PAYABLE  
P.O. BOX 025263  
MIAMI, FL 33102-5263  
USA

Ship To: 55740014  
B/E AEROSPACE CONSUMABLES  
9835 NW 14TH ST  
MIAMI, FL 33172  
USA

Shipped From:  
ALCOA FASTENING SYSTEMS  
AEROSPACE PRODUCTS  
NEWBURY PARK, REPUBLIC OPERATIONS  
1300 Rancho Conejo Blvd  
Newbury Park, CA 91320  
TEL: (805) 262-4200

Ship Date: 09/10/14  
Print Date: 09/10/14  
Time: 10:18:13

Ship Via: FED EX OVERNIGHT  
INCO Terms: FCA NEWBURY PARK

Container/Weight:  
Carrier Shipment Ref: 894595  
Bill Lading #:

export license requirements.

Ln	Item Number	Description	Rev	Qty Shipped	Qty B/O UM
----	-------------	-------------	-----	-------------	------------

7	RH30A5	Hex Nut, 8740, TSO-C148		22470.0	77530.0 EA *
---	--------	-------------------------	--	---------	--------------

Low Height, Lightweight

Cust Line #: 7

Customer Item: MS21042L5

Required Date: 04/02/14 Promised Date: 04/09/14

\*\*\*DUAL CERT TO: NAS1291-5\*\*\*

MFG C OF C CHEM & PHYS TEST REPORT REQ

Loc/Lot: f-2030 51693 22,470.00 COO: mx

HTS CODE: 7318160085

SCHEDULE-B NUMBER: 7318160000 ECCN: 9A991

The export classification appears above. You are responsible for all related export license requirements.

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\* Total Qty Shipped: 181,590 \*\*\*\*\*

## CERTIFICATE OF CONFORMANCE

This is to certify that all items noted above were produced in conformance with the contract, drawing specifications, and other applicable documents. All required process certifications, chemicals and physical test reports are on file subject to examination. This document must not be reproduced except in full and relates only to the items tested.

*Delfina Martinez* *Occyline Martinez*  
Name Signature

A.F.S. Republic

ALCOA GLOBAL FASTENERS, INC.

ALL CLAIMS REGARDING THIS ORDER MUST BE REPORTED TO SELLER PROMPTLY. CLAIMS FOR CREDIT OR REPLACEMENT OF PARTS MAY BE LIMITED TO THOSE PARTS FOR WHICH TRACEABILITY HAS BEEN MAINTAINED BY THE BUYER. THE SELLER'S MANUFACTURING LOT IDENTIFICATION NUMBER AND RETURN MERCHANDISE AUTHORIZATION (RMA) NUMBER MUST ACCOMPANY ALL RETURNS. ANY CLAIM BASED ON AN ALLEGED DISCREPANCY IN QUANTITY, QUALITY, ETC. BETWEEN THE GOODS ACTUALLY SHIPPED AND/OR DELIVERED UNDER THESE DOCUMENTS AND THE DESCRIPTION THEREOF IN THESE DOCUMENTS, MUST BE MADE IN WRITING TO SELLER NOT LATER THAN NINETY (90) DAYS AFTER THE SHIPPING DATE APPEARING HEREON.

CUSTOMER'S COPY

**Alcoa  
Fastening  
Systems**



Aerospace Products ; Republic Operations

**QUALITY OPERATING FORM**

Document: **F-10.700.6**  
Revision: 5  
Date: June 26, 2014  
DCN: 2370

**CERTIFICATE OF TEST**

WE HEREBY CERTIFY THAT ALL MATERIALS USED IN THE MANUFACTURE OF PARTS COVERED BY THE REPORT CONFORM TO THE MATERIAL SPECIFICATIONS CALLED FOR BY THE PURCHASE ORDER. WE FURTHER CERTIFY THAT THE PARTS ARE MANUFACTURED IN ACCORDANCE WITH APPLICABLE DRAWINGS OR SPECIFICATIONS CURRENT ON THE DATE OF MANUFACTURE. TEST REPORTS COVERING MATERIALS IN THESE PARTS AND INDICATING CONFORMANCE WITH APPLICABLE SPECIFICATIONS ARE ON FILE AND SUBJECT TO EXAMINATION. PARTS AS SHIPPED HAVE NEVER BEEN IN CONTACT WITH MERCURY. **THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT WRITTEN APPROVAL OF THE LABORATORY.**

PARTS MANUFACTURED IN: ☐ U.S.A. ☒ MEXICO  
AFS IS IN COMPLIANCE WITH DFAR 252.225.7009

*Delfina Martinez*  
Signature of Quality Assurance Representative

9-10-14  
Date

P.O. No: 0MMR88

Item No: MS21042L5 REV.1

Quantity  
Ordered: 181,590

Date Cert  
Ordered: 9-10-14

Customer: B/E AEROSPACE  
CONSUMABLES

ID No.: 51693

Description: HEX NUT

Procurement  
Spec.: NASM25027

Also Certified  
To: NAS1291-5 REV.14

Additional  
Info: RH30A5

Date of  
Manufacture: 8-25-14

Notice to Subsequent Purchaser or Repacker.  
These articles are imported. The requirements of 19 U.S.C. 1304 & CFR part 134 provide that the articles or their containers must be marked in a conspicuous place as legibly, indelibly & permanently as the nature of the article or container will permit, in such a manner as to indicate to an ultimate purchaser in the United States, the English name of the country of origin of the article.

**IF APPLICABLE, CHECK ON BELOW:**

☐ **FAA CERTIFICATION (PMA):** IT IS HEREBY CERTIFIED THAT (A) THE PARTS AND/OR MATERIALS REFLECTED HERE-IN WERE PRODUCED UNDER FEDERAL AVIATION ADMINISTRATION APPROVED MANUFACTURING AND QUALITY CONTROL SYSTEMS/METHODS AS SET FORTH IN FEDERAL AVIATION REGULATION, PART 21, SUB-PART K, PARAGRAPH 21.303 AND (B) ALL PARTS AND/OR MATERIALS ARE CERTIFIED NEW, CONFORMS TO THE DESIGN DATA AND ARE IN AIR WORTHY CONDITION.

Signature of Quality Assurance Representative

Date

☒ **TSO-C148 STATEMENT:** THE PARTS CONTAINED IN THIS SHIPMENT HAVE BEEN MANUFACTURED AND INSPECTED IN ACCORDANCE WITH TSO-C148. THE CONDITIONS AND TESTS REQUIRED FOR TSO APPROVAL OF THIS ARTICLE ARE MINIMUM PERFORMANCE STANDARDS. AIRCRAFT FASTENERS APPROVED UNDER THIS TSO ARE NOT NECESSARILY INTERCHANGEABLE WITH OTHER AIRCRAFT FASTENERS APPROVED UNDER THIS TSO. FASTENERS OF SIMILAR DIMENSIONAL PROPERTIES MAY HAVE WIDELY VARYING PERFORMANCE AND METALLURGICAL PROPERTIES. SUBSTITUTION OF PARTS MAY ONLY BE DONE IS ACCEPTABLE TO OR APPROVE BY THE ADMINISTRATOR.

*Delfina Martinez*  
Signature of Quality Assurance Representative

9-10-14  
Date



## Results of Self-Locking Nut Testing

Conducted in accordance with EASA SIB No.:2012 06R2

Part No. MS21042L5

B/E Aerospace Control No.(s) 2014I12280

Manufacturer's Lot No. 51693

Date testing commenced – 02 Dec 2014

Date testing completed – 09 Dec 2014

Tested by – Simon Varney

### Method –

- 1) Representative sample of 22 nuts withdrawn from stock. Nuts assembled to suitable bolts and spacers to torque value referenced in EASA SIB No.:2012-06R2 Table 1.
- 2) Assembly of Self-Locking Nut, Bolt and Spacer checked post torque application to verify components correctly seated and aligned.
- 3) After 7 days the 22 nut/spacer/bolt disassembled and visual inspection conducted for indications of cracking or damage.
- 4) Evaluate and report results.

### Equipment used –

Norbar Torque Wrench Serial No. 2014/288483

Calibration Certificate No.191606

Results - PASS / FAIL -

No defects were detected during visual examination of the sample nuts.

Signed

B/E Aerospace stamp No.



Date 09 Dec 2014

### Limitations

The opinions expressed in this report are those of the testing engineer, the company does not accept responsibility for any action attributed to this report. The tests are conducted in a controlled environment with experienced engineers but are always subject to uncertainties, the results and the information provided are therefore not absolute.

**FINAL (PROCESSING, LAB, MECHANICAL TESTING) INSPECTION REPORT**

Lot Number: <b>51693</b>	Part Number: <b>RH30A5</b>	Dwg. Number: <b>NASM21042</b>	Dwg. Rev#: <b>1</b>	Lot Quantity: <b>181,590</b>	Date: <b>8-27-14</b>
Procurement Spec.: <b>NASM25027</b>		Proc. Spec. Rev#: <b>1</b>	Note: All Specifications Referenced Refer To The Most Current Revision Unless Otherwise Stated		
SAMPLE SIZE	CHARACTERISTIC DESCRIPTION	INSPECTION MEDIA	ACCEPTANCE STAMP	PRODUCTION RELEASE DATE	
NUT	Material: <b>Wire Tech, Inc.</b> Heat: <b>20171520</b> Size: <b>.415</b>	Vendor Certification Alloy Verification	<b>RFM 209-1</b>	<b>8-25-14</b>	
CAP	Material: Heat: Size:	Vendor Certification Alloy Verification	<b>N/A</b>		
BASKET	Material: Heat: Size:	Vendor Certification Alloy Verification	<b>N/A</b>		
CLIP	Material: Heat: Size:	Vendor Certification Alloy Verification	<b>N/A</b>		
	AMS2759/3 Stainless Steel Only Aged Load:	Tensile HRC Hardness Tester	<b>N/A</b>		
<b>15</b>	AMS-H-6875 Steel Only Austempering Load: <b>9-3-14</b>	Tensile HRC Hardness Tester	<b>RFM 207-1</b>	<b>9-4-14</b>	
	AMS2410 [ ] AMS2411 [ ]	Visual Adhesion And Thickness ASTM B568	<b>N/A</b>		
<b>80</b>	AMS-QQ-P-416 Class 1 [ ] 2 [ ] 3 [ ]	Visual Adhesion And Thickness ASTM B568	<b>RFM 207-1</b>	<b>9-8-14</b>	
	AMS2400	Visual Adhesion And Thickness ASTM B568	<b>N/A</b>		
<b>10</b>	Embrittlement Relief	23 [ ] 48-50 [ ] Clip Hours Stress At Room Temp Per NASM1312, Test 14	<b>RFM 207-1</b>	<b>9-8-14</b>	
	Embrittlement Relief	96 [ ] Hours Stress At Service Temp Per NASM1312, Test 14 [ ] BPS-N-70 [ ]	<b>N/A</b>		
<b>80</b>	Gold Chromate Treatment Type II	Visual- Workmanship Salt Spray Test of AMS-QQ-P-416	<b>RFM 207-1</b>	<b>9-8-14</b>	
	Stainless Steel Only Passivated Per AMS-QQ-P-35, AMS2700	Visual High Humidity Test Per NASM1312	<b>N/A</b>		
	Magnetic Permeability <2:0 (Air 1.0) For A Field Strength = 200 Oersteds	Indicator Per ASTM A342 Method 3, Corrosion Resistant Steel Only	<b>N/A</b>		
<b>80</b>	Non-Destructive Testing Discontinuities Sample <b>M</b> 100% [ ]	Magnetic Particle Per ASTM E1444 or Fluorescent Penetrant Per ASTM E1417	<b>RFM 207-1</b>	<b>9-8-14</b>	
32 PCS	Carbowax Per C-1315 Drawing Batch No :	Visual, Workmanship	<b>N/A</b>		
<b>27</b>	Dry Film Lubricant Per AS5272 Type 1 Batch No : <b>PC14939</b>	Visual, Workmanship, Adhesion Per AS5272 Verify Periodic Salt Spray	<b>RFM 207-1</b>	<b>9-9-14</b>	
	Microstructure	BPS-N-70 [ ] NAS3350 [ ]	<b>N/A</b>		
<b>32</b>	Threads Per MIL-S-8879, AS8879	Method B, System 22	<b>RFM 209-1</b>	<b>8-14-14</b>	


### Push-Out, Torque-Out, Wrenching Torque, Tensile Test Results

LOT NUMBER	BPS-N-70 ATTRIBUTE PLAN	NOTE	25027 ATTRIBUTE PLAN
51693	LOT SIZE SS	ALL SAMPLES TESTED MUST MEET OR EXCEED THE MINIMUM REQUIREMENTS	LOT SIZE SS
	UNDER 9..... 2		UNDER 10M..... 5
	9 THRU 15..... 3		10M THRU 50M..... 10
	16 THRU 25..... 4		50M THRU 100M..... 15
	26 THRU 90..... 5		OVER 100M..... 27 ✓
	91 THRU 280..... 7		
	281 THRU 3200..... 13		
	OVER 3200..... 15		

<b>PUSH-OUT TEST</b>						<b>DATE:</b> _____	<b>MIN.</b> _____	<b>POUNDS</b>	<b>PUSH-OUT REQUIREMENTS</b>
				N/A		PASS / FAIL		STAMP _____	

TORQUE-OUT TEST		DATE: _____		WRENCH SN: _____		TORQUE-OUT REQUIREMENTS	
				MIN. _____ INCH POUNDS			
						PASS / FAIL	
							STAMP _____

[illegible]

TENSILE TEST					DATE: <u>9-9-14</u>	MACHINE SN: <u>223753</u>	STAMP: 
TEST BOLT: <u>592-2317</u>					25027 REQ <u>920</u>	LBS	BPS-N-70 REQ <u>          </u>
<u>10120</u>	<u>10120</u>	<u>10120</u>	<u>10120</u>	<u>10120</u>	HIGH = <u>10130</u>	<input checked="" type="checkbox"/> PROOF LOAD TEST *	
<u>10120</u>	<u>10120</u>	<u>10120</u>	<u>10120</u>	<u>10120</u>	LOW = <u>10120</u>	<input type="checkbox"/> TESTED TO FAILURE	
<u>10120</u>	<u>10120</u>	<u>10120</u>	<u>10130</u>	<u>10120</u>	R = <u>10</u>	(RANGE = HIGH MINUS LOW)	
<u>10120</u>	<u>10120</u>	<u>10120</u>	<u>10120</u>	<u>10120</u>	X = <u>10120</u>	(AVERAGE TENSILE STRENGTH)	
<u>10120</u>	<u>10120</u>	<u>10120</u>	<u>10120</u>	<u>10120</u>	R x .4 = <u>4</u>		
<u>10120</u>	<u>10120</u>				X-.4R = <u>10116</u>		


\*Note: The required Safety Load is 3% minimum above the specified minimum Proof Load requirement as described in QOP 10.702.



**FINAL TORQUE AND HARDNESS TEST RESULTS**

Lot Number: <b>51693</b>	Part Number: <b>RH30A5</b>	Dwg. Number: <b>NASM21042</b>	Dwg. Rev#: <b>1</b>	Lot Quantity: <b>181,590</b>
-----------------------------	-------------------------------	----------------------------------	------------------------	---------------------------------

BPS-N-70 ATTRIBUTE PLAN			Other:		25027 ATTRIBUTE PLAN		
Lot Size	Sample Size	Accept	Sample Size	Accept	Lot Size	Sample Size	Accept
UNDER 9	2	0			Under 10M	5	0
9 THRU 15	3	0			10M THRU 50M	10	0
16 THRU 25	4	0			50M THRU 100M	15	0
26 THRU 90	5	0			OVER 100M	27	0
91 THRU 280	7	0					
281 THRU 3200	13	0					
OVER 3200	15	0					

TORQUE TEST															
Test Bolt: NAS9705				Test Bolt Lot #: 32273M				Date: 9-9-14				Stamp: 			
Max. In.Lbs.: (1 <sup>ST</sup> ON) 60.0			Min. In.Lbs.: (1 <sup>ST</sup> BRK) 6.5			Seated Load: —			NOTE: Record all cycles exhibiting values exceeding or not meeting maximum or minimum requirements as described in QOP 10.703, paragraph 8.7 and 9.11.						
CY	ON	BRK	ON	BRK	ON	BRK	ON	BRK	ON	BRK	ON	BRK	ON	BRK	
1	32.0	27.0	32.0	30.0	37.0	39.0	38.0	39.0	30.0	26.0	32.0	33.0	42.0	38.0	
7	26.0	26.0	33.0	32.0	27.0	29.0	29.0	31.0	28.0	23.0	28.0	29.0	37.0	39.0	
15	18.0	28.0	28.0	25.0	32.0	33.0	28.0	28.0	25.0	20.0	28.0	25.0	28.0	32.0	
1	37.0	29.0	28.0	27.0	33.0	34.0	32.0	30.0	30.0	27.0	30.0	32.0	30.0	31.0	
7	25.0	25.0	25.0	23.0	27.0	31.0	27.0	25.0	23.0	22.0	25.0	27.0	27.0	28.0	
15	25.0	25.0	20.0	27.0	27.0	30.0	24.0	27.0	28.0	24.0	28.0	28.0	28.0	28.0	
1	42.0	38.0	37.0	35.0	37.0	38.0	28.0	26.0	32.0	29.0	37.0	35.0	37.0	37.0	
7	46.0	37.0	36.0	31.0	37.0	33.0	28.0	28.0	29.0	30.0	33.0	31.0	34.0	34.0	
15	37.0	33.0	32.0	27.0	28.0	31.0	28.0	28.0	29.0	28.0	30.0	29.0	28.0	29.0	
1	37.0	32.0	33.0	27.0	40.0	35.0	34.0	32.0	37.0	36.0	27.0	28.0			
7	32.0	31.0	30.0	27.0	31.0	31.0	23.0	25.0	35.0	33.0	29.0	33.0			
15	33.0	31.0	25.0	25.0	28.0	29.0	27.0	24.0	28.0	32.0	27.0	26.0			

HARDNESS TEST															
CONVERTED FROM 30N SCALE TO HRC per ASTM E140				HRC Requirement: Min.: _____ Max.: <b>49</b>				Date: <b>9-4-14</b>				Stamp:			
HRC	47	47	46	46	46	45	46	48	46	46	46	46	45	45	45
30N	65.9	65.4	64.8	64.6	64.4	64.2	64.4	66.5	65.1	65.1	64.7	64.5	64.1	64.2	64.3
15N*															

\* CLIPS AND NUTS ONLY



**WireTech, Inc.**

6440 E. Canning Street  
Los Angeles, CA 90040  
Phone (323) 722-4933  
Fax (323) 721-2738

SOLD TO

ALCOA/REPUBLIC FAST.  
1300 Rancho Conejo Blvd.  
Newbury Park, CA 91320  
USA

WORK ORDER  
103073

# CERTIFICATION

HEAT NO.  
20171520  
SALES ORDER / RLS  
852300 / 1  
ISO 9001-2000 REGISTERED



MECHANICAL TESTING  
CERT # 911.01

CERT# 911.01

CUSTOMER P.O. 220698434	CUSTOMER PART	QUANTITY 4,190 Lbs	CARRIERS 4	LADING NO 00107652	SHIPMENT DATE 01/03/2014			
SPECIFICATION R108740-104150A A-8740, AQ, SKFG, CHQ WIRE, SEAM & DEARB FREE, SAIP Zinc Phosphate, Lime & Stearate Coating, Size:0.414/0.416 Specifications: AMS 2301K, AMS6322N, MIL-S-6049A, AMEND. 1, AMS-S-6049-A								
CERTIFICATION REQUIREMENTS								
Chemical Properties								
C .40	Si .24	Mn .86	P .009	S .003	Cu .09	Ni .42	Cr .53	Mo .21
Physical Properties								
Grain Size Jominy 1	Jominy 2	Jominy 3	Inclusions Macro	Cleanliness Mill	Source			
6 0	0	0	S2-R1-C2	GOOD	F&S=0			
Country of Origin USA - DFAR Compliant								
Mechanical Properties								
TEST	UNITS	Results						
Tensile Strength	KSI	82.8						
Yield Strength	KSI	70.4						
% Elongation	%	30						
% Reduction of Area	%	74.7						
Rockwell Hardness B Scale	HRB (s)	86						
Decarb (Total)	In	0.00						

RFM  
1  
AV  
14-512

Merchandise covered by this invoice is warranted to be free from defects in workmanship or material but not for any specific length of time, type or measure of service. No claim for allowance will be recognized unless presented in writing within 10 days time after receipt of material. Our maximum liability for any claim predicated upon defective merchandise is limited to replacement of it, or to repayment of it, or to repayment of the purchase price thereof, as we elect. Material cut to specific length or size cannot be returned for credit and request for cancellation of such orders will not be considered if manufacture has been commenced. Buyer, by acceptance of the merchandise covered by this invoice, agrees to the foregoing terms and conditions and those set forth on the reverse hereof. "The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal statutes including Federal law, Title 18, Chapter 47."

REPRODUCTION OF THIS CERTIFICATION IS NOT ALLOWED UNLESS IN FULL.

Wire Tech, Inc. metallurgical laboratory is accredited in the following test: chemical analysis per ASTM E 415, mechanical testing per ASTM A 370, Rockwell hardness per ASTM E 18, metallographic mount preparation per ASTM E 3, decarburization depth per ASTM E 1077, IFI 140, inclusion rating per ASTM E 45, decarburization performed as per IFI 140. The reported Chemical and Physical Properties are Melt Source results. Transcribed from mill certificates. HRB(W) are hardness results performed with a 1/16" carbide ball. Unless otherwise specified, HRB and HRC results are conversions from ASTM A370 tables 1 and 2. \*Test result not covered by our current A2LA accreditation. Tests which have been undertaken by a subcontractor laboratory that is not accredited are not endorsed by A2LA or covered by Wire Tech, Inc. A2LA accreditation.

TEST RESULTS RELATE ONLY TO THE ITEMS TESTED.  
"LATEST REVISIONS OF ASTM"

DFAR Material per Clauses 252.225-7014 ALT. 1, 252.225-7009, & 225.003(9)

Material is free of mercury, radium, or alpha contamination.

*Garry Goodson*



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXaerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172

### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
24	800	EA	NAS1149F0432P		Y1527	ANILLO INDUSTRIES	10630		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15



**ANILLO Industries, Inc.**

2090 NORTH GLASSELL STREET, ORANGE, CA 92865-3391 USA  
PLEASE REMIT TO  
P.O. BOX 5586 ORANGE, CA 92863-5586 USA  
(714)637-7000 (562)924-6632 FAX(714) 637-3022

**569544****Packing List & Certification**

WE ACCEPT  
VISA/MASTER/DISCOVER/AMEX

<b>SOLD TO</b> B/E AEROSPACE, INC. ATTN: ACCOUNTS PAYABLE DEPT. 10000 NW 15TH TERRACE MIAMI, FL 33172		<b>1165</b>	<b>SHIP TO</b> B/E AEROSPACE, INC. CONSUMABLES MANAGEMENT 9835 NW 14TH ST MIAMI, FL 33172		<b>E</b>
DATE ORDER REC'D <b>12/07/2011</b>	ORDER NUMBER <b>1A1351</b>	INVOICE DATE	SHIPPED VIA <b>FEDXG 033101490</b>	TERMS 1% 10 DAYS, NET 30	
ITEM	ORDERED	SHIPPED	DESCRIPTION		NET WEIGHT

1 6,670,018 **500,000** **NAS1149F0432P**  
REV 5 /LOT#Y1527 /MIN/MAX /QCR:1,4,6,8,15,16/AN960-416L  
ECCN: 9A991 Schedule B#: 7318.22.0000 COO: USNLR

We certify that: 1. item number 1 above is manufactured in accordance with the material and processing specifications of this order.  
2. We certify that the material on this order conforms in all respects to the current applicable government and/or manufacturer's specification. Test reports are on file and are available for examination on all Anillo manufactured parts. All claims for errors or shortages must be made within 10 days after receipt of goods.  
No good to be returned without written authorization. All claims for defective material must be filed within 30 days of shipment to receive consideration. We do not assume financial responsibility or liability from the use of products sold, other than the replacement value of the products sold, if claimed within the specified time limit above.

&lt;&lt; R.M.A.# REQUIRED FOR RETURNS &gt;&gt;

&lt;&lt; TO THE BEST OF OUR KNOWLEDGE, PARTS ARE MERCURY FREE &gt;&gt;

**Certification**

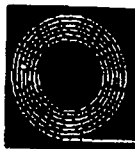
B/E Aerospace, Inc.  
Consumable Management  
Self Release

Signature &amp; Stamp:

Date: 7-3-14

BY Ben Omidwar  
Ben Omidwar, Quality Assurance Manager

FI 4.03.05

**CERTIFIED TEST REPORT****Calstrip Steel Corporation**7140 Bandini Blvd. • Los Angeles, CA 90040-3388  
(323)726-1345 • Fax (323)722-8269

<b>Customer:</b> HIGHTOWER METAL PRODUCTS <b>Address:</b> P.O. BOX 5586 ORANGE, CA 92613-5586	<b>Order Number:</b> S95003 / W121134 <b>Customer PO:</b> 33137 <b>Shipped Date:</b> 04/22/2014 <b>Packlist ID:</b> 163921
<b>Part ID:</b> H280.1020031-CS <b>Description:</b> CS1020 .031 X 3.630 X COIL <b>Drawing #:</b> H280.1020031 <b>Rev #:</b>	<b>Material Spec:</b> CS 1020 AMS 5046D

**HeatID:** 052944**CHEMICAL ANALYSIS**

C	Mn	P	S	Si	Ni	Cr	Cu	Mo	Resi
0.1830	0.3890	0.0050	0.0090	0.0100	0.0100	0.0200	0.0220	0.0010	
W	V	Sn	Ti	Al	Ca	Zr	Co	N	B
	0.0010		0.0010	0.0360				0.0060	

**MECHANICAL AND PHYSICAL PROPERTIES**

Yield	Tensile	Elong %	Hardness	Bend Test
38,800	57,600	29.0	HRB 70	OK

Grain Size	Olsen Test	Spher%	Decarb	Reduct %
7				

Skid Numbers	# of Coils	Weight
W121134-10	2	1,446
W121134-5	3	2,324
W121134-6	3	2,228
W121134-7	3	2,266
W121134-8	3	2,224
W121134-9	2	1,472
	16	11,960

**Comment:** SOURCE- POSCO (USA)**CERTIFIED COPY OF ORIGINAL**

We hereby certify that this document is a correct copy of reports now on file at Anglo Industries, Inc.

**Date:** MAY 20 2014**Part Number:** NAS114910432P**Lot Number:** 41527**Signature:**   
**Title:** Quality Records Clerk**Form #:****Print Date:** 4/22/2014**MARIO VARGAS** Technical Services

AN960-9164

**Page:** 1



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXaerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
7	200	EA	CR3213-5-03		87536267	CHERRY AEROSPACE SAN 11815			

  
\_\_\_\_\_  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15



**CHERRY®**  
**AEROSPACE**  
SPS Fastener Division, a PCC Company

Cherry Aerospace  
1224 East Warner Avenue  
Post Office Box 2157  
Santa Ana, CA 92707-0157  
USA



# PACKING LIST

Order No: S0325901 Page: 1  
Order Date: 06/12/08  
Print Date: 08/31/11



Sold-To: 10015341

Ship-To: 19000244

**SOLD TO**  
B/E AEROSPACE  
PO BOX 025263  
MIAMI, FL 33102-5263  
USA

**SHIP TO**  
B/E AEROSPACE INC C.M.  
10000 N.W. 15TH TERRACE  
MIAMI, FL 33172  
USA

Salesperson (s):110

Purchase Order: 0FJ829

Credit Terms: Net 30  
Net 30

Ship Via: -FEDEX\*FREIGHT-

FOB: Origin - Collect

## Remarks:

IF UNDER 150# SHIP FEDEX GROUND COLLECT ACCOUNT# 0331-0149-0  
IF OVER 150# SHIP FED EX NATIONAL ACCOUNT# 018757 - DO NOT INSURE  
DO NOT PREPAY AND ADD TO ANY OF THE ABOVE METHODS  
DO NOT SHIP EARLIER THAN TWO (2) WEEKS PRIOR TO DUE DATE, UNLESS SPECIFIED.

\*\*\*\*\*  
BRITISH AEROSPACE APPROVAL# BAe/AG/30158/MAA to BAe/AG/QC/SC1 PART 3  
AIRBUS APPROVAL# 30114  
\*\*\*\*\*

GOODS OF UNITED STATES ORIGIN  
\*\*\*\*\*

FASTENERS ECCN: 9A991d SCHEDULE B# 8803300010  
TOOLS ECCN: EAR99 SCHEDULE B# 8467290095

Ln	Item Number	Site T LocationLot/Serial	Qty Open Qty to Ship	UM	Promised Shipped	
8	CR3213-5-03 Customer Item: S2906-5-3 NAS9301BNS-5-03 NAS9301B-5-03 M7885/2-5-03 ASNA0078A503 * IF APPLICABLE, PART MEETS DFARS CLAUSE 252.225-7014 ALT I * PREFERENCE FOR DOMESTIC SPECIALTY METALS EZLINE-3 87536267	1600	34329.0	EA	10/03/11	

**TEST REPORTS ENCLOSED DO NOT DESTROY**

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited

## CERTIFICATION

## ATTENTION: PURCHASING DEPARTMENT

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications, Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

Quality Assurance Representative

Signed

SIM NGUYEN

**CHERRY** AEROSPACE  
SFS Fastener Division, a PCC Company1224 East Warner Avenue  
Santa Ana, CA 92707-0157Accredited  
**Nadcap**  
Chemical Processing  
Heat Treating  
ISO/IEC 17025  
Material Testing Lab**Final Inspection & Test Report**  
**CherryMax® Rivet****An ISO9001 and AS9100 registered company. OASIS #6111041606**

Part Numbers	Rev	Proc. Spec.	Rev	Lot I.D. No.:	87536267
CR3213-5-03	AB	PS-CMR-3000	R	Lot Size:	35,000
CR3213PR-5-03	AB	PS-CMR-3000	R	MFG. Date:	August 31, 2011
** See 2nd Page for the Customer Parts					

**ASSEMBLY DATA**

TYPE	ID #	CERT #	MATERIAL	FINISH	LUBE
Rivet	87531508	A67467	QQ-A-430/5056	MIL-C-5541 CLEAR CL1A	None
Stem	87531516	A67635	AMS6322 / 8740ST	QQ-P-416/T2CL2/CAD PL	None
Collar	00000000	A67505	A-286 / AMS5731	Passivate per AMS2700	None

W.O. #: 5447985

Final Lube: None

**QUALITY CONFORMANCE/ACCEPTANCE RESULTS**

MIN REQ'D SAMPLE SIZE SPECS	INSTALLED SHEAR		TENSION		SPINDLE RETENTION			DISASSEMBLY
	840		445		200			10
	8	N/A	8	N/A	5	8	N/A	5
	C-N-M	B	C-N-M	B	C-N-M	M	B	C-N-M
RESULTS	1365		572		543	400		67
	1273		569		535	384		100
	1354		566		489	434		50
	1317		576		541	404		68
	1336		571		512	396		83
C=CR N=NAS	1258		572			412		
M=MIL B=BAC	1349		570			410		
LOAD VALUES	1315		595			385		
IN POUND								

PCS. ITEM20 EXAMINATIONSTATUSPASSPCS. ITEM20 INSTALLATION (Min and Max Grips)STATUSPASS**Comments:**

Blind Fastener

Tr. Rev: -

Rev. Date: 8/31/2011

Inspector

**D Rice****Q Code****V09**

The parts contained in this shipment have been manufactured and inspected in accordance with TSO-C148. The conditions and tests required for TSO approval of this article are minimum performance standards. Aircraft fasteners approved under this TSO are not necessarily interchangeable with other aircraft fasteners approved under this TSO. Fasteners of similar dimensional properties may have widely varying performance and metallurgical properties. Substitution of parts may only be done if acceptable to or approved by the Administrator.

This test report shall not be reproduced except in full, without the written approval of the laboratory.

The recording of false, fictitious, or fraudulent statement or entries on the certificate may be punished as a felony under Federal law.



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172

### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
1	200	EA	CCR264SS-3-02		87427443	CHERRY AEROSPACE SAN	11815		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15



**CHERRY®**  
**AEROSPACE**  
 SPS Fastener Division, a PCC Company

Cherry Aerospace  
 1224 East Warner Avenue  
 Post Office Box 2157  
 Santa Ana, CA 92707-0157  
 USA



# PACKING LIST

Order No: SO325868  
 Order Date: 06/11/08  
 Print Date: 12/28/10

Page: 1



Sold-To: 10015341

Ship-To: 19000244

S O L D T O	B/E AEROSPACE
	PO BOX 025263
	MIAMI, FL 33102-5263
	USA

S H I P T O	B/E AEROSPACE INC C.M.
	10000 N.W. 15TH TERRACE
	MIAMI, FL 33172
	USA

Salesperson (s):110

Purchase Order: 0FJ315

Credit Terms: Net 30  
 Net 30

Ship Via: FEDEX NATIONAL CL  
 FOB: Origin - Collect

## Remarks:

IF UNDER 150# SHIP FEDEX GROUND COLLECT ACCOUNT# 0331-0149-0  
 IF OVER 150# SHIP FED EX NATIONAL ACCOUNT# 018757 - DO NOT INSURE  
 DO NOT PREPAY AND ADD TO ANY OF THE ABOVE METHODS  
 DO NOT SHIP EARLIER THAN TWO (2) WEEKS PRIOR TO DUE DATE, UNLESS SPECIFIED.

\*\*\*\*\*  
 BRITISH AEROSPACE APPROVAL# BAe/AG/30158/MAA to BAe/AG/QC/SC1 PART 3  
 AIRBUS APPROVAL# 30114  
 \*\*\*\*\*

GOODS OF UNITED STATES ORIGIN  
 \*\*\*\*\*

FASTENERS ECCN: 9A991d SCHEDULE B# 8803300010  
 TOOLS ECCN: EAR99 SCHEDULE B# 8467290095

Ln	Item Number	Site T LocationLot/Serial	Qty Open Qty to Ship UM	Promised Shipped
6	CCR264SS-3-02	1600	EA	02/01/11
	Customer Item: S1972-2			
	* IF APPLICABLE, PART MEETS DFARS CLAUSE 252.225-7014 ALT I			
	* PREFERENCE FOR DOMESTIC SPECIALTY METALS			
		B0503 87427442	9600.0	( )
		EZLINE-2 87427447		
			43000.0	( )
		EZLINE-2 87427448	96300.0	( )
		M0402 87427443		
			38600.0	( )

**TEST REPORTS ENCLOSED**  
**DO NOT DESTROY**

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## ATTENTION: PURCHASING DEPARTMENT

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications. Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

Quality Assurance Representative

Signed

SIM NGUYEN



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXaerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

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**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
19	1000	EA	MS21043-3		M021200-000	ALCOA KAYNAR FULLERT	15653		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15



# Alcoa Fastening Systems



Packing Slip



Packing Slip: 9948069751

Page: 1

Bill To: 5574  
B/E AEROSPACE, INC.  
P.O.BOX 025263  
MIAMI FL 33102-5263  
USA

Ship To: (14)  
B/E AEROSPACE CONSUM MGMT  
9835 NW 14TH ST  
MIAMI FL 33172  
USA

From:  
ALCOA FASTENING SYSTEMS  
AEROSPACE PRODUCTS  
FULLERTON OPERATIONS  
800 SOUTH STATE COLLEGE  
FULLERTON CA 92831  
USA

Notice to Subsequent Purchaser or Repacker.  
These articles are imported. The requirements of 19 U.S.C. 1304 & CFR part 134 provide that the articles or their containers must be marked in a conspicuous place as legibly, indelibly & permanently as the nature of the article or container will permit, in such a manner as to indicate to an ultimate purchaser in the United States, the English name of the country of origin of the article.

Order Contact:

Pack Date	Order #	Cust PO	Ship Via	Weight	Pkgs #
08/28/13	F433565	OFRW45			

Line/Rel	Item	Ordered	Qty To Pack
4-1	AST840 H41-3	625.000	91.746

C/I: MS21043-3

PO Item #: 2

\*\*\* TSO C-148 APPVD PART. TSO LABEL REQ'D \*\*\*

Cust Date: 06/10/13

Kay Date: 08/24/12

Lot: M021200-000 COO:MEXICO

Waybill: ECCN:9A991 Schedule-B Number:7318.16.0000

HTS-Code:7318.16.0060

The export classification appears above. You are responsible for all related export license requirements.

MFG C OF C CHEM & PHYS TEST REPORT REQ

\*\* DUAL CERT TO NAS1291C3 AND LS8859-3

\*\*

SHIP VIA : FED EX AIR

BUYER: CRISTINA SANCHEZ

PHONE:

## CERTIFICATE OF CONFORMANCE

This is to certify that all items noted above were produced in conformance with the contract, drawing specifications, and other applicable documents. All required process certifications, chemicals and physical test reports are on file subject to examination. This document must not be reproduced except in full and relates only to the items tested.

*Michele M. Varela*  
MICHELE M. VARELA  
Quality Manager  
Fullerton Operations

ALCOA GLOBAL FASTENERS, INC.

Kaynar Products: Cage Code 15653 • Eagle Products: Cage Code 66776 • Rosan Products: Cage code 66776

ALL CLAIMS REGARDING THIS ORDER MUST BE REPORTED TO SELLER PROMPTLY. CLAIMS FOR CREDIT OR REPLACEMENT OF PARTS MAY BE LIMITED TO THOSE PARTS FOR WHICH TRACEABILITY HAS BEEN MAINTAINED BY THE BUYER. THE SELLER'S MANUFACTURING LOT IDENTIFICATION NUMBER AND RETURN MERCHANDISE AUTHORIZATION (RMA) NUMBER MUST ACCOMPANY ALL RETURNS. ANY CLAIM BASED ON AN ALLEGED DISCREPANCY IN QUANTITY, QUALITY, ETC. BETWEEN THE GOODS ACTUALLY SHIPPED AND/OR DELIVERED UNDER THESE DOCUMENTS AND THE DESCRIPTION THEREOF IN THESE DOCUMENTS, MUST BE MADE IN WRITING TO SELLER NOT LATER THAN NINETY (90) DAYS AFTER THE SHIPPING DATE APPEARING HEREON. FOR ITEMS CERTIFIED TO BPS-N-70, ALLOY VERIFICATION HAS BEEN PERFORMED ON PARTS WITH A DATE OF MANUFACTURE ON OR AFTER JANUARY 1, 2001. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.

CUSTOMER'S COPY

# Alcoa Fastening Systems



Packing Slip



Packing Slip: 9948069751

Page: 2

Bill To: 5574  
B/E AEROSPACE, INC.  
P.O.BOX 025263  
MIAMI FL 33102-5263  
USA

Ship To: (14)  
B/E AEROSPACE CONSUM MGMT  
9835 NW 14TH ST  
MIAMI FL 33172  
USA

From:  
ALCOA FASTENING SYSTEMS  
AEROSPACE PRODUCTS  
FULLERTON OPERATIONS  
800 SOUTH STATE COLLEGE  
FULLERTON CA 92831  
USA

Order Contact:

Pack Date	Order #	Cust PO	Ship Via	Weight	Pkgs #
08/28/13	F433565	OFRW45			

Line/Rel

# CERTIFICATION

MATERIAL COMPLIES WITH DEARS 252 225-700  
9 "PREFERENCE FOR DOMESTIC SPECIALTY  
METALS" WITH ITS ALTERNATE 1.

\*\*\*SHIP VIA FEDX AIR COLLECT ACCT# 0331-  
0149-0 IF 150 LBS OR MORE:SHIP FED  
EX FREIGHT ECONOMY COLLECT ACCT# 018757.

\*\*\*  
DO NOT SHIP BY ANY OTHER WITHOUT PROPER  
WRITTEN AUTHORIZATION.

ALLOWABLE SHIPPING TOLERANCE = +0%-0 %.  
\*\* BAR CODE PER QAP 33 CLAUSE P REQUIRED

\*\*\*  
\*\* QAP 33.0 REV F CLAUSES: A,A.1,B,C,E,H  
,P,U,V. CLAUSE A.3 GENERAL TERMS  
APPLIES.

\*\*\* PER JESSICA 8/24 PULL IN MARCH & JUN  
E SCH FROM 2013 TO ASAP VB 8/24  
chem & phys certs

## CERTIFICATE OF CONFORMANCE

This is to certify that all items noted above were produced in conformance with the contract, drawing specifications, and other applicable documents. All required process certifications, chemicals and physical test reports are on file subject to examination. This document must not be reproduced except in full and relates only to the items tested.

MICHELE M. VARELA  
Quality Manager  
Fullerton Operator

ALCOA GLOBAL FASTENERS, INC.

Keynar Products: Cage Code 15653 • Eagle Products: Cage Code 66776 • Rosan Products: Cage code 66776

ALL CLAIMS REGARDING THIS ORDER MUST BE REPORTED TO SELLER PROMPTLY. CLAIMS FOR CREDIT OR REPLACEMENT OF PARTS MAY BE LIMITED TO THOSE PARTS FOR WHICH TRACEABILITY HAS BEEN MAINTAINED BY THE BUYER. THE SELLER'S MANUFACTURING LOT IDENTIFICATION NUMBER AND RETURN MERCHANDISE AUTHORIZATION (RMA) ACCOMPANY ALL RETURNS. ANY CLAIM BASED ON AN ALLEGED DISCREPANCY IN QUANTITY, QUALITY, ETC. BETWEEN THE GOODS ACTUALLY SHIPPED AND/OR DELIVERED MUST BE SUBMITTED WITHIN 90 DAYS AFTER THE SHIPPING DATE. DOCUMENTS AND THE DESCRIPTION THEREOF IN THESE DOCUMENTS, MUST BE MADE IN WRITING TO SELLER NOT LATER THAN NINETY (90) DAYS AFTER THE SHIPPING DATE. HEREON. FOR ITEMS CERTIFIED TO BPS-N-70, ALLOY VERIFICATION HAS BEEN PERFORMED ON PARTS WITH A DATE OF MANUFACTURE ON OR AFTER JANUARY 1, 2001. FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.

CUSTOMER'S COPY

<b>Alcoa Fastening Systems</b>  Aerospace Products Fullerton Operations 800 S. STATE COLLEGE BLVD FULLERTON, CA 92831		<h1 style="margin: 0;">TEST REPORT</h1>		NO. 8190060  Lot No. M021200-000		Page 1 of 3		
Supplier Item No. AAT840			Supplier Part No. H41-3					
Interchange Part No. 525-595-9005 Rev. N		Interchange Part No. GTS297-4 Rev. 3		Interchange Part No. H41-3				
Interchange Part No. LS8859-3 Rev. A		Interchange Part No. MS21043-3 Rev. 3		Interchange Part No. N8862175/E Rev. 5a				
Interchange Part No. NAS1291A3 Rev. 13		Interchange Part No. NAS1291C3 Rev. 13		Interchange Part No.				
Manufactured Quantity 91746		Mfg. Date 01/16/13		Generic Description NUT 6 POINT		Thread Size .1900-32		
PLATE/COAT AMS 2410 REV. K				HEAT TREAT AMS-H-6875 REV. B				
Non-Destruct ASTM E1417 REV. 11 E1 SAMPLE				PERFORMANCE NASM25027 REV. 1				
Material Spec. # 1 AMS 5731-L		Mill Heat No. 567379		Control Heat No. AA18631C		Material Supplier CARPENTER TECHNOLOGY CORP		
Special Process Requirements: <b>THREADS AND GAUGING PER AS8879 Rev.DR12 and ASME B1.3M SYS. 22</b> <b>MIN EQUALS BKWY MAX EQUALS INST.</b> <b>* CONFORMS TO AMS5732J AFTER HT TREAT</b> <b>MAGNETIC PERMEABILITY LESS THAN 2.0</b>								
TEST RESULTS								
TEST No. Description	UOM	SAMPLE Number	RESULT Cycle	MINIMUM Value	MAXIMUM Value	PASS/Fail	MINIMUM Requirement	MAXIMUM Requirement
1 - 010 TORQUE TEST 18 lbs max install./2.0 lbs min bkwy.	IN#	1	1	9.80	9.55		2.00	18.00
			7	7.65	9.40			
			15	7.30	8.60			
		2	1	4.35	4.95			
			7	3.75	3.95			
			15	3.95	4.20			
		3	1	5.55	5.40			
			7	4.45	5.05			
			15	4.20	4.55			
		4	1	4.85	6.00			
			7	3.95	4.70			
			15	3.95	4.25			
		5	1	6.60	6.40			
			7	6.90	7.55			
			15	6.25	7.50			
		6	1	7.90	8.30			
			7	7.65	7.50			
			15	7.85	7.65			
TEST RESULTS - Continued on next page								
THIS REPORT MUST NOT BE REPRODUCED EXCEPT IN FULL AND RELATES ONLY TO THE ITEMS TESTED								
The product identified on this Certificate has been manufactured, tested and unless otherwise noted, conforms in all respects to the applicable drawings, specifications and standards. Complete reports of physical and chemical tests are on file for examination. If no specified customer quality level is required, goods conform to sellers quality level. All Damages Exceeding Price are Excluded. For items certified to BPS-N-70 alloy verification has been performed on parts with a date of manufacturing on or after January 1, 2001. Quality system sampling plan conforms to the requirement of QAP EQ001, QAP EQ002, QAP EQ003. The recording of false, fictitious, or fraudulent statements or entries on the certificate may be punished as a felony under federal law.						 MICHELE M. VARELA, QA MGR.		

ALCOA GLOBAL FASTENERS, INC.

SHIPPER#: 9948069751

Rev. 12/02 Form 11199



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172

### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
17	1200	EA	MS21042L4		45781-000	MACLEAN-ESNA	019L2		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15

**MACLEAN-ESNA  
A MACLEAN-FOGG COMPANY  
POCAHONTAS, ARKANSAS 72455**

**CERTIFICATE OF QUALITY COMPLIANCE**

DATE: 10/28/2014

TO: B/E AEROSPACE  
9835 NW 14TH ST  
MIAMI, FL 33172

ESNA PART NO. M52LF3324-4  
MANUFACTURER'S LOT SIZE 486468 (APPROX. WT. COUNT)  
MANUFACTURED UNDER SHOP ORDER NUMBER 45781 - 000  
ORIGINATED AS SHOP ORDER NUMBER  
CUSTOMER PO #: 0PYW91 PACKING LIST #: 66120  
ESNA ORDER #: 080310 QTY PACKAGED: 266247  
CUSTOMER PART #: MS21042L4 & NAS1291-4

**ACCEPTANCE TESTS PER NASM25027 REV 1**

**MATERIAL** RAW MATERIAL TYPE 281 4037 WIRE DATE MFG: 06/30/14  
RAW MATERIAL CONFORMS TO AMS 6300E AS EVIDENCED BY THE ATTACHED MILL CERTIFICATION. ESNA SHOP  
ORDER NO. 45781 - 000 MILL HEAT NO. 10303760 VENDOR WIRE TECH  
**FINISH** FINISH TYPE CAD. PLATE TO SAE AMS QQ-P-416B, TY II, CL 2  
LUBRICANT TYPE EVERLUB 620C DRY FILM LUBE PER AS5272 TYPE I

ACCEPTED 23 HRS STRESS EMBRITTLEMENT LOADED TO 33 IN LBS. MIN.

**AXIAL STRENGTH** REQUIRED LBS. MINIMUM 6470 ALL SAMPLE PIECES TESTED MEET OR EXCEED  
EXCEEDS LBS. 6490 MINIMUM REQUIREMENTS.

SAMPLE SIZE 15 PIECES.

HARDNESS REQUIREMENT RC 43-46 IS 43-45

**WORKMANSHIP** CONFORMS DIMENSIONALLY TO MS21042L4 PER NASM21042 REV 1 & NAS1291-4 REV 14 STANDARD.  
BEARING SURFACE SQUARENESS AS SPECIFIED PER NASM25027 REV 1

**DISCONTINUITIES**

WITHIN LIMITS PER NASM25027 REV 1

AND MIL-STD-271D/ACN 1/ AND REV E/ NOTICE 2/ AND REV F/ NOTICE 1.

ASTM E1444/E1444M REV 12

MT PER SPEC 718 X

SAMPLE SIZE( MT - PCS): 50

ACCEPTED(PCS): 50

PT PER SPEC 731

SAMPLE SIZE( PT - PCS): 0

ACCEPTED(PCS): N/A

This is to certify that all applicable plating, heat treating, and inspection processing and that all material used in the manufacture of subject parts conform to the specification or drawings received by ESNA and set forth in the subject purchase order; that the parts are of good material and workmanship; and that all necessary records, including chemical and physical where applicable, will be made available for review upon request. The inspection and test reports provided represent the actual attributes of the items furnished on this contract and indicate full compliance with all applicable specification and contract requirements.

This is to certify that the materials supplied against the subject order are free of contamination by presence of mercury.

SIGNATURE

*Mara Kildow*  
for **TERESA MELTON, QUALITY ASSURANCE MANAGER**  
Mara Kildow, Quality Technician

FSCM/CAGE NO. 019L2

QAF68 REV. 10-2-14



**WireTech, Inc.**

6440 E. Canning Street  
Los Angeles, CA 90040  
Phone (323) 722-4933  
Fax (323) 721-2738

SOLD TO

Maclean - ESNA  
611 Country Club Road  
Pocahontas, AR 72455  
USA

WORK ORDER  
104436

# CERTIFICATION

HEAT NO.  
10303760  
SALES ORDER / RLS  
853210 / 1  
ISO 9001-2000 REGISTERED



MECHANICAL TESTING  
CERT # 911.01

CERT# 911.01

*Handwritten:* 2MIR 28222  
PO 26302  
281 4287

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	CARRIERS	LADING NO	SHIPMENT DATE
26302-00	0420070281	2,135 Lbs	2	00110969	06/30/2014

SPECIFICATION M054037-102810A  
A-4037, AQ, SKFG, CHQ WIRE, SEAM & DECARB FREE, SAIP Zinc Phosphate, Lime & Stearate Coating,  
Size:0.279/0.283 Specifications: AMS 6300 E, 1042C

## CERTIFICATION REQUIREMENTS

### Chemical Properties

C	Si	Mn	P	S	Cu	Ni	Cr	Mo
.37	.25	.75	.008	.008	.08	.05	.16	.21

### Physical Properties

Grain Size	Jominy 1	Jominy 2	Inclusions	Macro	Cleanliness	Mill Source
6	J1=55	J5=34	S2-R1-C2	GOOD	F&S=0	Charter

Country of Origin  
USA - DFAR Compliant

**45781-000**

### Mechanical Properties

TEST	UNITS	Results
Tensile Strength	KSI	70.3
Yield Strength	KSI	59.7
% Elongation	%	25
% Reduction of Area	%	71.1
Rockwell Hardness B Scale	HRB (s)	79
Decarb (Total)	In	0.00

**RECEIVED**  
JUL 07 2014

*Handwritten:* 034 62

Merchandise covered by this invoice is warranted to be free from defects in workmanship or material but not for any specific length of time, type or measure of service. No claim for allowance will be recognized unless presented in writing within 10 days time after receipt of material. Our maximum liability for any claim predicated upon defective merchandise is limited to replacement of it, or to repayment of it, or to repayment of the purchase price thereof, as we elect. Material cut to specific length or size cannot be returned for credit and request for cancellation of such orders will not be considered if manufacture has been commenced. Buyer, by acceptance of the merchandise covered by this invoice, agrees to the foregoing terms and conditions and those set forth on the reverse hereof. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal statutes including Federal law, Title 18, Chapter 47.

REPRODUCTION OF THIS CERTIFICATION IS NOT ALLOWED UNLESS IN FULL.

Wire Tech, Inc. metallurgical laboratory is accredited in the following test: chemical analysis per ASTM E 415, mechanical testing per ASTM A 370, Rockwell hardness per ASTM E 18, metallographic mount preparation per ASTM E 3, decarburization depth per ASTM E 1077, IFI 140, inclusion rating per ASTM E 45, decarburization performed as per IFI 140. The reported Chemical and Physical Properties are Melt Source results. Transcribed from mill certificates. HRB(W) are hardness results performed with a 1/16" carbide ball. Unless otherwise specified, HRB and HRC results are conversions from ASTM A370 tables 1 and 2. \*Test result not covered by our current A2LA accreditation. Tests which have been undertaken by a subcontractor laboratory that is not accredited are not endorsed by A2LA or covered by Wire Tech, Inc. A2LA accreditation.

TEST RESULTS RELATE ONLY TO THE ITEMS TESTED.  
"LATEST REVISIONS OF ASTM"

DFAR Material per Clauses 252.225-7014 ALT. 1, 252.225-7009, & 225.003(9)

Material is free of mercury, radium, or alpha contamination.

*Handwritten signature*

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled, and processed in the United States meeting DFARS compliance, LEEDS compliance, REACH compliance, ROHS-WEEE compliance, and Conflict Materials Restrictions.
2. Mercury was not used during the manufacture of this product, nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory	Address
0358-01	7388	CSSM Charter Steel Melting Division	1635 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSSR/ CSSP Charter Steel Rolling/ Processing Division	1635 Cold Springs Road, Saukville, WI 53080
0358-03	123633	CSFP Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSCM/ CSCR Charter Steel Cleveland	4300 E. 49th St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel System

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Specifications	CSSM	CSSR/ CSSP	CSFP	CSCM/ CSCR
Chemistry Analysis	ASTM E415; ASTM E1019	X			X
Macroetch	ASTM E381	X			X
Hardenability (Jominy)	ASTM A255; SAE J406; JIS G0561	X			X
Grain Size	ASTM E112	X	X	X	X
Tensile Test	ASTM E8; ASTM A370		X	X	X
Rockwell Hardness	ASTM E18; ASTM A370	X	X	X	X
Microstructure (spheroidization)	ASTM A892		X	X	
Inclusion Content (Methods A, E)	ASTM E45		X		X
Decarburization	ASTM E1077		X	X	X

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 1/31/15. All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgement (designated by our Sales Order number) to the customer's purchase order. Both order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.

BMH 28022  
PO 26202  
281 4037



45781-000



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
10	12	EA	MS17984C413		1438754	AVIBANK MFG.	84256		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15



\*\* DEARS \*\* \*\* CERT Q13-P \*\*



**AVIBANK**  
MFG. INC.

AEROSTRUCTURES DIVISION, A PCC COMPANY

11500 SHERMAN WAY • NORTH HOLLYWOOD, CA 91605

PHONE: (818) 392-2100 • FAX: (818) 255-2094

No ozone depleting substances used in processes.

**CERTIFICATE OF CONFORMANCE**

SHIPPER

DATE SHIPPED

06/27/14

PAGE 1 OF 2 DATE ENTERED 02/07/14 SALES ORDER NO. 690479-0137

**B** 103866  
**I** B/E AEROSPACE, INC. (MIAMI)  
**L** 10000 N.W. 15TH TERRACE  
**L**  
**T** MIAMI, FL  
**O** USA 33172

**S** B/E AEROSPACE CONSUMABLE MGMNT  
**H** 9835 NW 14TH ST  
**I**  
**P**  
**T** MIAMI, FL  
**O** USA 33172

CUSTOMER ORDER NO.		CONTRACT NUMBER		RATING		ORDERED BY		REC'D BY		TERRITORY NO.	
OWEH24						ROHAN		GLE		124	
QTY	UNIT	DD 2500	RES PKG	RESALE	OR TAX	TYPE OF INSPECTION		TERMS		FREIGHT	
0	1	1	3	N	N	R		1/2% 10 NET 30		NOHO/COLLECT	
SHIPPED VIA											
FEDEX GROUND											
ITEM NO.	NO. SHIPPED		UNITS	PART NUMBER / DESCRIPTION						NO. BACKORDERED	
1	53		E	FEDEX ACCT# 0331-0149-0 QAP 33.0 CLAUSES A,A.1,B,C,E,H,P.U.V APPLY *** 3 LOT MAX *** BLC4BA13S MS17984C413 SHIP#: 1 QTY 53 LOT:1438754 AREA : AISLE : SEC: DUE : SHELF						0	
<p>TO OUR VALUED CUSTOMERS A RETURN MATERIAL AUTHORIZATION (RMA) NUMBER IS REQUIRED FOR ALL PRODUCTS RETURNED TO AVIBANK TO REQUEST A RMA NUMBER CONTACT YOUR AVIBANK SALES ASSOCIATE AT 818/392-2100</p> <p>THESE COMMODITIES WERE EXPORTED FROM AVIBANK MFG., INC. IN ACCORDANCE WITH EXPORT ADMINISTRATION REGULATIONS OR INTERNATIONAL TRAFFIC IN ARMS REGULATIONS. DIVERSION CONTRARY TO U.S. LAW IS PROHIBITED. COMPLIANT WITH DFARS 252.225.7014 ALT 1</p>											
AUTHORIZED BY: <i>[Signature]</i> DATE: 6/28/14 NO. OF PKGS: WEIGHT:											

We hereby certify that all materials used in the manufacture of parts covered by this report conform to the material specifications called for by the above purchase order. We further certify that the parts are manufactured in accordance with applicable drawings or specifications current on the date on which the order was placed. Test reports covering materials in these parts, and indicating conformance with applicable specifications, are on file and subject to examination. No ozone depleting substances were used in processes. Parts are mercury free of contamination.

WI-14-AMS-004 REV:NC

AVIBANK MFG., INC.

BY: *[Signature]* AUTHORIZED QUALITY CONTROL REPRESENTATIVE



**AV BANK**  
MFG. INC.  
AEROSTRUCTURES DIVISION, A PCC COMPANY  
11500 SHERMAN WAY • NORTH HOLLYWOOD, CA 91605  
PHONE: (818) 392-2100 • FAX: (818) 255-2094

# CERTIFIED TEST REPORT

1 of 1

CUSTOMER: B/E AEROSPACE, INC. (MIAMI)

SHOP ORDER NO./WORK ORDER NO.: 1438754

CUSTOMER P/N: MS17984C413

CUSTOMER P.O.: 0WEH24

QTY. SHIPPED: 53

AVIBANK P/N: BLC4BA13S RV. N

PART NAME: S/A STANDARD

PROCUREMENT SPEC: NAS1332

BODY WO.: 1439079 QTY. MFG'D: 53

PROCESS	PROCESSOR	TYPE/CLASS	SPECIFICATION
ANODIZE	K & L ANODIZING CORP. BURBANK, CA.	II/2	MIL-A-8625 'F'
HEAT TREAT	AVIBANK MFG., INC., NO. HOLLYWOOD, CA.	CH900	AMS2759 'E'
HEAT TREAT	AVIBANK MFG., INC., NO. HOLLYWOOD, CA.	HRC 40 MIN	AMS2759 'E'
PASSIVATE	AVIBANK MFG., INC., NO. HOLLYWOOD, CA.	2	AMS2700 'E'

NO.	* BOLT TENSILE (LBS.)	TORQUE (IN LBS.)	* RETAINING DEVICE TENSILE (LBS.)	** SHEAR (LBS.)
1.	N/A	N/A	274 NF	10,174
2.	N/A	N/A	292 NF	10,113
3.	N/A	N/A	268 NF	10,100
4.				
5.				
REQT.	N/A MIN.	N/A MIN.	230 MIN.	9,200 MIN.

\* BF = BALL HOLE FAILED. \* TF = THREADS FAILED. \* NF = NO FAILURE. \*\* (S) = SINGLE SHEAR. \*\* (D) = DOUBLE SHEAR.

OTHERS: THESE PARTS WERE LAB TESTED PER 'NAS' REQTS AND FOUND ACCEPTABLE.  
SALES ORDER NO. 690479-0137.

AVIBANK MFG., INC. CERTIFIES THAT THE PARTS LISTED ABOVE WERE MANUFACTURED IN COMPLIANCE WITH YOUR PURCHASE ORDER. ALL TEST AND INSPECTION REPORTS ARE ON FILE AT AVIBANK FOR VERIFICATION.

AUTHORIZED SIGNATURE:

*Norma Castanaza*  
NORMA CASTANAZA Q.C. CLERK



DATE: 06/28/14

Job # 2930



FAST LANE PRECISION

## Certificate of Conformance

Customer: Avibank MFG

Part Number: 16-4C

Description: Shoulder Ring

Order Quantity: 20000

Customer Purchase Order: 753872

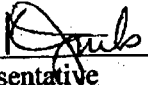
Rev: AC

Heat #: H1A1

Material #: C1769

Remarks

Parts were manufactured from documented work instructions, using approved suppliers and processors. All components have been inspected and approved with inspection and certification on file at our facility.

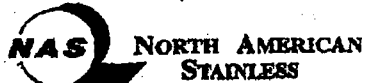
  
Quality Assurance Representative

1 Apr 14  
Date



APR 11 2014

**CERT REVIEW**  
MAIN LOT # 1438754  
COMPONENT LOT # KB 30699  
NAME Shoulder Ring



# SNA13145 METALLURGICAL TEST REPORT

6870 Highway 42 East  
Ghent, KY 41045-9615  
(502) 347-6000

C1769

<b>Certificate:</b> 833261 02  <b>Customer:</b> 0370 002 <b>NAS Order:</b> LP 604 5 <b>Your Order:</b> NAS2492	<b>Mail To:</b> SUMMIT STAINLESS STEEL, LLC. 1001 ELIZABETH STREET NORTH BRIDGEMAN NJ 08902  <b>Item Code:</b>	<b>Ship To:</b> SUMMIT STAINLESS STEEL, LLC. 9848 U.S. 90 A SUGARLAND TX 77478  <b>Date:</b> 5/06/2013 <b>Page:</b> 1 of 4 <b>Steel:</b> 303 <b>Finish:</b> Cold Draw <b>Dia/Thk:</b> .4063 in <b>Leg Length:</b> 144.00 in <b>Corrosion:</b>
--	---	---



PR 11 2014

### PRODUCT DESCRIPTION:

Round Bar, Annealed, Cold Draw  
ASTM A582/12 EN 10204 3.1, ASTM A484/11  
AMS 5640U TYPE 1, Q35-754B CONDITION A  
SOLUTION ANNEAL TEMP 1900F MIN

### REMARKS:

COMPLIES W/REQUIREMENTS OF DPAF 252.225-7014A-1 EU DIRECTIVE  
2011/65/EU. ROHS. EAF+MOD+CC. NO WELD REPAIR. MELTED AND MFG  
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight
BF39576	2500								

### CHEMICAL ANALYSIS

CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan) Chemical Analysis per ASTM A751/08

Heat Supplier #	CM	C %	CO %	CR %	CU %	MN %	MO %	N %	NI %	P %	S %
H1A1	US	.034	.17	17.31	.25	1.80	.26	.045	8.47	.035	.3300
		SI %									
		.51									

### MECHANICAL PROPERTIES

1 d o i R	HB No.	.2YS ksi	UTS ksi	RA %	Elong % 2"
BF39576 R L	213.0	81.41	105.43	34.57	32.05

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS

Technical  
Dept. Mgr.

ERIC HESS

M.D. 12/26/13



1901 N. Narragansett Ave. • Chicago, Illinois 60639  
773/804.0404 • Fax 773/804.0408  
www.industeel.com  
An ISO 9001 Certified Company

11/05/13

ISW Order/Invoice Number: 171013-00

SOLD TO: A9990  
AVIBANK MFG. CO.

SHIP TO: A9991  
AVIBANK MFG. CO.  
11500 SHERMAN WAY

P.O. BOX 9909  
NO HOLLYWOOD CA 91609

NO. HOLLYWOOD, CA 91605

CUSTOMER PO: 751295

085017BT

.0850"17-7 PH STAINLESS COND C CNT CLS

WEIGHT: 500

HEAT NUMBER: E121590

#### CHEMISTRIES

C	Mn	P	S	Si	Cr	Ni	Al
.082	.880	.029	.001	.269	16.630	7.560	.926
Mo	Cu						
.310	.255						

#### PHYSICAL PROPERTIES

TENSILE: 253000C 307000CH

TORSIONS: OK

ROCKWELL #1:  
ROCKWELL #2:

BENDS: OK  
SALT SPRAY HOURS:  
COATING WEIGHT:  
GRAIN SIZE:

YIELD STRENGTH: 000000C/000000CH  
ELONGATION:  
REDUCTION OF AREA:

\*\*\* SPECIFICATIONS \*\*\*  
ASTM A313-10  
AMS 5678-F

TARIFF: 7223.00  
NAFTA: B

MELT: GB UNITED KINGDOM  
ORIG: GB UNITED KINGDOM  
MILL: INDUSTRIAL ALLOYS  
DFAR: Y  
ROHS: Y

#### CERT REVIEW

MAIN LOT # 1438754  
COMPONENT LOT # 1403259  
NAME Ring

\*\*\*\* MERCURY FREE \*\*\*\*

Rey Domingo, Quality Control Manager



1389733

NOV 8 '13

The values and specifications herein are passed through from the manufacturer directly to the customer.  
Please see reverse side or www.industeel.com for all Terms and Conditions of Sale.  
Material Properties Sheet 70403-MPS Version 1 Approved by BF 11/20/12

# Certified Inspection Report

10/31/13  
12:20:21

Alcoa Inc.  
Massena Operations  
Park Avenue East, Massena, NY 13662



Customer **Bralco Metals** Customer P.O. No. **43-113052** Customer Part No. **Alcoa Order No. MMC-A8845-002** Govt. Contract No.

Ship To **Bralco Metals**  
**15090 Northam St**  
**La Mirada, CA 90638**

We hereby certify that the material covered in this report has been inspected in accordance with, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, or as previously agreed to with customer and that samples representative of the material met the composition limits and have the mechanical properties shown on the face of this sheet. Manufactured under an ISO/TS 16949 registered quality management system. Melted and manufactured in the USA.

*James E. Samuel II*  
James E. Samuel II, Quality Assurance Manager

Date Shipped **10/31/13** Weight Shipped **751 lbs** Product **CFRB-SMS-ROD DIA. X 12 FT** BOL **000161531**  
Alloy - Temper **2024-T351** Size **0.81250 IN** Shape **DIA** Config **12 FT** QRR

## Specifications:

AMS 4120R (Except Marking)  
AMS-QQA-225/6A  
Material conforms to T4 requirements  
QA-225/6E (1)  
ASTM B211-12E1

Product produced and marked to the requirements of AMS-QQ-A-225/6 also meets the requirements of QQ-A-225/6.  
Product produced and marked to the requirements of QQ-A-225/6 also meets the requirements of AMS-QQ-A-225/6.

TEST REQUIREMENTS		Test	Test	Test	Test	Test	Test	Test	Test	Test
		U.T.S.	T.Y.S.	%Elong						
Max:										
Min:		62.0	45.0	10.0						

Test Results		Test	Test	Test	Test	Test	Test	Test	Test	Test
Lot / Work Order		U.T.S.	T.Y.S.	%Elong						
MA20133395										
No. of Tests	6									
Max:		69.4	53.1	22.5						
Min:		68.6	52.4	20.5						

When 2 or more tests per lot are made, the highest and lowest values are reported.  
Analysis obtained from one or more samples in this lot.

## TEST ABBREVIATIONS

U.T.S. Ultimate Tensile Strength KSI T.Y.S. Tensile Yield Strength KSI %Elong Elongation % in 2"

Aluminum Association Chemical Composition Limits (in Weight %)

ALLOY	MAX	%SI	%FE	%CU	%MN	%MG	%CR	%ZN	%TI	%Others	%Others	%AL
2024	MIN	0.50	0.50	4.9	0.9	1.8	0.10	0.25	0.15	0.05	0.15	Rem
				3.8	0.30	1.2				Each	Total	

## Actual Started Chemistry

LOT/WORK ORDER	MAX	%SI	%FE	%CU	%MN	%MG	%CR	%ZN	%TI	%OE	%OT	%AL
MA20133395	MIN	0.06	0.26	4.7	0.68	1.5	0.02	0.05	0.03	LT 0.05	LT 0.15	Rem
		0.06	0.26	4.6	0.64	1.4	0.01	0.03	0.02			

## NOTES:

Mercury is not a normal contaminant in aluminum alloys and neither it nor any of its compounds are used in the manufacture of our product.

This alloy meets the requirements of EU 2011/65/EC (RoHS) and EU 2000/53/EC for lead, mercury, cadmium and hexavalent chromium.



1341273  
CERT REVIEW

NOVMAIN LOT #438754

COMPONENT LOT #

KB 30616

Page 1

NAME

Button Handle

THIS METAL HAS NOT BEEN EXPOSED TO MERCURY OR MERCURY CONTAINING COMPOUNDS WHILE IN THE POSSESSION OF BRALCO METALS

Sold to: AVIBANK MFG PO: 750515 Part: Order No.: 437192

TR clerk signature:

K & L Anodizing Corporation

# Certification

Order No.: 307138

Date: 01/06/2014

Entry Date: 12/16/2013

Page: 1 of 1

**To:**

Avibank Mfg. Inc.  
11500 Sherman Way  
P.o. Box 9909  
North Hollywood CA 91609-1909

Purchase Order No.: 753483

Packing List No.:

Material: 2024-T4

299285

We are pleased to provide you with the following Certification. The item(s) described were finished and accepted in accordance with the stated specification  
Nadcap Accredited

Quantity	Part Number / Part Name / Part Description	Pounds
4,710	5-4AB Rev. P Button-Handle	

Mil-A-8625 Rev.F Amend. 1 KLC 001 / KLC 0007

Anodize per Mil-A-8625 Rev. F Am. 1 Type II Class 2 Black.  
Mercury Contamination Free

Insp. Type	Scale	Minimum	Maximum	Number	Other
<b>Customer Requirements:</b>					
Visual					Sample or 100%

LSS# 200

Notice: All finishing completed by K & L Anodizing will carry a liability not to exceed the amount of the finishing charges for the work done on any material. The only exception shall be by written agreement signed by both parties.

**CERT REVIEW**

MAIN LOT #

1438754

COMPONENT LOT #

KB 30616

NAME

Button Handle

Q. C. Review

Sig.

Date

1/6/14

Lot# 1405697

Nadcap AS7003 #4908143853 10/31/2015  
Nadcap AC7108 #4908153454 10/31/2014

Sharyn McGinity  
K.L. Cert Department  
K & L Anodizing Corp.



Linear Motion. Optimized.

SHIP TO: AVIBANK MFG INC  
11500 SHERMAN WAY  
NORTH HOLLYWOOD CA 91605  
United States

### CERTIFICATE OF CONFORMANCE

DELIVERY NAME: 2937200 DATE PRINTED: 21-FEB-2014 PAGE: 1 of 1

SHIP FROM: ABEK LLC  
492 Birch Street  
Bristol CT 06010  
United States

Tel: (860) 314-3921 Fax: (860) 314-3942

BILL TO: AVIBANK MFG INC  
11500 SHERMAN WAY  
NORTH HOLLYWOOD CA 91605  
United States

PICK-UP DATE: 20-FEB-2014	SHIP METHOD: UPS-Truck-Ground	FREIGHT TERMS: COLLECT - FROM ORIGIN	FSCM:					
DELIVERY TERMS EXWORKS FACTORY	TAX NAME: EXEMPT	CUSTOMER TAX NUMBER:	WAYBILL: 1Z0176470369205040					
SHIPPING INSTRUCTIONS: ACCT# 60X10X		TAG NUMBER/REF:		PO REF#:				
ITEM NUMBER	REFERENCE ITEM	ITEM DESCRIPTION	CUSTOMER PO NO.	ORDER NO.	LINE ORDER NUMBER	UOM	QTY ORDERED	QTY SHIPPED
SS0078121CXXXDF	SS0078121CXXXDF	5/64 440C GRADE 100 (DFAR REQUIRED) - SS0078121CXXXDF	754588	1799757	1.1	MPC	100.0	97.8
COUNTRY OF ORIGIN: ****EAR99****		United States						
Lot Number	Quantity	Heat Number	Hardness Test				Hardness	
L0013815	38.8	G13158K02	HRC				60-83	
L0013813	15.0	548226	HRC				60-62	
L0013814	44.0	548226	HRC				60-62	
Material meets DFAR 25.225-7009:7014. ✓ Material certs meet ASTM F-2215. ✓ Material meets AMS QQ S 763 and AMS 5630 ✓ Heat Treat meets AMS 2759/5 ✓ Passivation meets AMS 2700 ✓ Country of Origin (Ball manufactured): USA ✓ Country of Melt (Material manufactured): USA ✓ These commodities, technology or software, if being exported from the United States must be exported in accordance with the Export Administration Regulations. Diversion contrary to U.S. Law is prohibited.								
CERT REVIEW								
MAIN LOT #		1438754						
COMPONENT LOT #		KB40065						
NAME		Ball						
NUMBER OF PACKAGES 1			GROSS WEIGHT 8.0 LB			VOLUME		
THE UNDERSIGNED, INDIVIDUALLY, AND AS THE AUTHORIZED REPRESENTATIVE OF THOMSON INDUSTRIES INC., WARRANTS AND REPRESENTS THAT; ALL THE INFORMATION SUPPLIED ABOVE IS TRUE AND ACCURATE; THE MATERIAL COVERED BY THIS CERTIFICATION CONFORMS TO ALL CONTRACT REQUIREMENTS (INCLUDING BUT NOT LIMITED TO THE DRAWING AND SPECIFICATIONS); THE INSPECTION AND THE ANALYSIS HEREIN ARE TRUE AND ACCURATE.								
QUALITY ASSURANCE MANAGER AUTHORIZED SIGNATURE								



# CERTIFICATE OF TESTS ABNAHMEPRUEFZEUGNIS CERTIFICAT DE CONTROLE

CERT SERIAL# 000564343



## CARPENTER

Carpenter Technology Corporation  
101 West Barn Street, Reading, Pa. 19601  
Tel: (610) 200-2000 (800) 338-4592

- THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.
- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
- MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.
- THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

SELLER/VERKÄUFER/VEDEUR PAGE 1 OF 2

ALN

CUSTOMER ORDER NO/BESTELL-NR./N° DE COMMANDE	CARPENTER NUMBER/S-NR./DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
213280	W49841	09/11/06	659

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE 548226

PRODUCT DESCRIPTION: CONSUMET TYPE 440C BEARING QUAL HOT DRAWN SPHERODIZED PRECOAT

SPECIFICATION: AMS 5618 REV G (05/06)  
~~AMS-00-S-763B (08/06)~~  
~~AMS 5880 REV C (05/06)~~  
~~AMS 5630 REV J (10/07)~~

SIZE 0.075000 IN. ( 1.90 MM) RD WIRE INGOT 3

PRIMARY HEAT CHEMISTRY(WT%): (TEST METHOD IS SHOWN IN PARENTHESIS)

C (COM)	MN (XRF)	SI (XRF)	P (XRF)	S (COM)	CR (XRF)
1.03	0.40	0.70	0.017	LT .001	16.97
NI (XRF)	MO (XRF)	CU (XRF)			
0.15	0.44	0.04			

MACROETCH: TESTED TO ASTM-A-604: MAXIMUM VALUES ARE 1A. 2A. 3A. 4A

TENSILE AS SHIPPED. KSI(MPA) 110.0( 758)

MAX QUENCH HARDNESS. HRC - 61 - 1925 F( 1052 C) 30 MN OIL TREAT

INCLUSION RATING - ASTM E45 METHOD D

ID	THIN	HEAVY	THIN	HEAVY	THIN	HEAVY	THIN	HEAVY
3X	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3A	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00

FRACTURE GRAIN SIZE: 8

CARBIDE SEGREGATION - FREE FROM EXCESSIVE SEG (VILELLAS)

DECARB - NONE (VILELLAS)

MAX QUENCH HARDNESS. HRC - 61 - 1875 F( 1024 C) 30 MN AIR COOL

CONTINUED ON NEXT PAGE

*Diana M. Kissling*

This certification is made to the customer printed on this form. Carpenter neither makes, nor assumes responsibility for, any representation or certification to other parties.  
 Die vorliegende Zertifizierung ist nur für den in diesem Formular genannten Kunden gültig. Carpenter übernimmt gegenüber Dritten keinerlei Haftung für die ausgetragenen Daten oder Zertifizierungen.  
 Ce certificat est uniquement valable pour le client dont le nom est imprimé sur ce formulaire. Carpenter n'assume pas de responsabilité pour une certification vis-à-vis d'une tierce personne.

**CERTIFICATE OF TESTS    ABNAHMEPRUEFZEUGNIS    CERTIFICAT DE CONTROLE**

CERT SERIAL# 000564343


**CARPENTER**

Carpenter Technology Corporation  
101 West Bern Street, Reading, Pa. 19601  
Tel: (610) 208-2800 (800) 338-4592

- THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.
- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
- MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND BAKKA SOURCE CONTAMINATION.
- THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

SELLER/VERKÄUFER/VEHDEUR PAGE 2 OF 2

ALN

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NUMBER/S-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
213288	W49841	09/11/06	659

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE 548226  
BILLET CHECK CHEMISTRY (WT%):

3A (TOP) C  
3X (BOTTOM) 1.06  
1.04

MATERIAL PRODUCED ON THIS ORDER WAS MELTED AND MANUFACTURED IN THE U.S.A. MATERIAL HAS BEEN MELTED IN USA OR QUALIFYING COUNTRY TO DFARS REQUIREMENTS 252.225-7014 WITH ALTERNATE 1 FOR QUALIFYING COUNTRY 225.872.1 CARPENTER'S QUALITY MANAGEMENT SYSTEM WAS REGISTERED AS OF NOVEMBER 24, 2007 TO THE REQUIREMENTS OF ISO 9001:2000 APPROVAL CERTIFICATE 07-0869 BY PERFORMANCE REVIEW INSTITUTE. CERTIFICATE OF TEST IS PREPARED IN ACCORDANCE WITH PARAGRAPH 3.1 OF EN 10204 (DIN 50049). WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS.

DATE REVISED: 01/19/10

DEANA KISSLING  
MET RELEASE/REQUIREMENTS ANALYST  
CARPENTER TECHNOLOGY CORPORATION

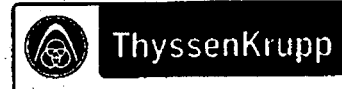
DFARS

OK

*Deana M. Kissling*

This certification is made to the customer printed on this form. Carpenter neither makes, nor assumes responsibility for, any representation or certification to other parties.  
Die vorliegende Zertifizierung ist nur für den in diesem Formular genannten Kunden gültig. Carpenter übernimmt gegenüber Dritten keinerlei Haftung für die ausgewiesenen Daten oder Zertifizierungen.  
Ce certificat est uniquement valable pour le client dont le nom est imprimé sur ce formulaire. Carpenter n'assume pas de responsabilité pour une certification vis-à-vis d'une tierce personne.

ThyssenKrupp Materials NA  
Copper and Brass Sales Division



ThyssenKrupp Materials NA 13336 Orden Drive Santa Fe Springs CA 90670

## DELIVERY NOTE

AVIBANK MFG INC  
11500 SHERMAN WAY  
NORTH HOLLYWOOD CA 91605-5827



DATE: 05/21/2014  
DOC. NO: 2403165594\*  
BOL. NO: 2403165594  
ORDER NO: 1401962024  
YOUR P/O: 757697  
CUSTOMER NO: 10009895  
Route: C2AC2  
CONTACT: Ginger M Sanchez  
TEL: 562-215-4398 ext 54398  
FAX: 800-926-8310 ext 8310  
EMAIL: Ginger.sanchez@thyssenkrupp.com

**ALL S/S BAR MUST BE DFARS COMPLIANT**  
**UNLD BY FORK: Y**  
**RCVG HOURS: 6-4PM MON-FRI LNCH 12-12:30PM**  
**6-4PM MON-FRI LNCH 12-12:30PM MAX SKID WT: 2000 MAX BUNDLE**  
**WT: 2000**

Deliveries are carried out for your account and risk acc. to our Gen. Terms & Cond. of Delivery and Payment.

ITEM	DESCRIPTION	NET QTY1 / QTY2 PACKAGE NO.
0010	XSSRD05811 T-17-4 Stainless Steel Cold Finish Cond A Round 0.2550 " (+ -.001) X 144.5000 Mill Length Actual Chemistry/Act. Physical Standard Packaging	6,177.375 Feet 1004306915 1,055 lb
TAGNUMBER QUANTITY UOM VENDOR VENDORPO HEAT/LOT PCS		
1004206124 6177 FT TRI STAR 5400218116 E131836		
SAE AMS 5643 R		

Total Gross Weight 1130.000 lb

All items, not declared as partial delivery, are final quantities.

Delivery Terms: PPD gem. Incoterms 2000 Prepaid

### CERTIFICATION OF COMPLIANCE

We hereby certify that mercury or any of its compounds are not used in the processing and distribution of our products. The products we distribute are not hazardous in their received state.  
For MSDS sheets go to [www.copperandbrass.com](http://www.copperandbrass.com). We hereby certify that the material above complies with the above specifications

John R Zambetti Director of Quality Assurance

### CERT REVIEW

MAIN LOT # 1438754  
COMPONENT LOT # 1439079  
NAME Body

**TRI STAR METALS, LLC**  
**611 WEST LAMM ROAD**  
**FREEPORT, IL 61032**  
*An ISO 9001:2008 Registered Company*

CERTIFICATE DATE: 4/25/14	CUSTOMER: COPPER & BRASS	
ORDER#: 209876	CUSTOMER PO#: 5400218116-R05 LINE 2	
MATERIAL: 17-4PH ✓	DESCRIPTION: 265" X 12" ✓	
HEAT NUMBER: E131836	QTY. SHIPPED: 3,164 LBS	
CONDITION: A	PART #: X9SRD05811	

**CHEMICAL COMPOSITION**

C ✓	Mn ✓	Si ✓	S ✓	P ✓	Ni ✓	Cr ✓	Mo ✓	Other Elements
.0120	.7300	.3290	.0270	.0280	4.6800	15.3400	.2000	Ti=.0010 Nb=.2500 ✓ Al=.0100 B=.0016 ✓ Co=.0890 Cu=3.3140 ✓ Sn=.0120 N=.0340 ✓ V=.0600 W=.0200 ✓ As=.0070 Ca=.0015 ✓ Ta=.0020 Pb=.0002 ✓

**MECHANICAL VALUES**

TENSILE (KSI)	YIELD (KSI)	ELONGATION (%)	REDUCTION OF AREA (%)	HARDNESS
132	120	14	49	264 HB

**AFTER HT CAPABILITIES 900F 1 HOUR AIR COOL**

TENSILE (KSI)	YIELD (KSI)	ELONGATION (%)	REDUCTION OF AREA (%)	HARDNESS
204	201	11	54	410 HB

**ADDITIONAL REMARKS:**

This material meets the chemistry specifications for AMS 5643R, ASTM A564-04, ASTM A484-10, ASME-SA-564 CHEM & MECH. Macro & Micro Structures OK per AMS 5643.  
 Delta Ferrite=.43% DFARS COMPLIANT.

**MATERIAL IS FREE FROM MERCURY CONTAMINATION: EN10204 3.1.B**  
**COUNTRY OF MELT: ENGLAND**

**MATERIAL IS MANUFACTURED IN THE UNITED STATES OF AMERICA**

I hereby certify that this data is correct as contained in the records of this company.

QUALITY CONTROL REPRESENTATIVE: \_\_\_\_\_

Q8D-007 REV. ORG. 4/17/2013

Robert Pierson - Quality Engineer

Q. C. Review

Sig. *[Signature]*

Date 5/23/14

Lot# 1443233

From: ThyssenKrupp Materials NA

Cust. AVIBANK MFG INC

CstAr

Wgt.: 1,055 LB

Del.: 2403165594

CstOr 757697

Date 05/20/2014

*John R. Zambetti*

Outokumpu Stainless Ltd.  
ASR Rod Mill  
Saverton Road  
Sheffield, S2 3XQ  
Telephone: +44 (0) 114 242 1184  
Fax: +44 (0) 114 242 2162



Prod-Nr  
Test certificate No **79888**  
No du certificat  
In Accordance With EN 10204, 3.1

Rechnung-Nr (Invoice/Order No) <b>71274</b>	Bestell-Nr Customer Order No <b>249212</b>	NORM <b>17/4PH(630) Rev 00-13-11 (UNS S17400) COND. A</b>
---	--	--

ADDRESS <b>Tri Star Metals LLC 611 W. Linn Rd Freeport, Illinois 61032 USA 61032</b>	Matr. Nr. Part No. <b>AV202578/01</b>
	Surface Treatment <b>SORTENED AND DESCALED</b>
	Form <b>7.00 mm Round</b>
	Quantity <b>21 rod coils for 16.0121</b>
	Signature <b>E181838</b> ✓

Schmelzanalyse						Cast Analysis						Analyse de Matière					
Si	Cr	Mn	P	S	Co	Si	Cr	Mn	P	S	Co	Si	Cr	Mn	P	S	Co
0.0120	0.3390	0.7300	0.0280	0.0270	16.3400	0.2090	4.8800	0.0010	0.0000	0.0100	0.0018						
Si	Cr	Mn	P	S	Co	Si	Cr	Mn	P	S	Co	Si	Cr	Mn	P	S	Co
0.0090	3.3140	0.0120	0.0340	0.0600	0.0200	0.0070	0.0015	0.0020	0.0000								

Mech and Phys Eigenschaften						Mechanical and Physical Properties						Caractéristiques Mécaniques					
0.2% R <sub>p</sub>	1.0% R <sub>p</sub>	UTS	Reling %	RA%	Hardness	0.2% R <sub>p</sub>	1.0% R <sub>p</sub>	UTS	Reling %	RA%	Hardness	0.2% R <sub>p</sub>	1.0% R <sub>p</sub>	UTS	Reling %	RA%	Hardness
99.755	132.130	138.625	2.7	80.8	7.0	99.755	132.130	138.625	2.7	80.8	7.0	99.755	132.130	138.625	2.7	80.8	7.0
De Long	WRC 1992	H900	H900	H900	H900	De Long	WRC 1992	H900	H900	H900	H900	De Long	WRC 1992	H900	H900	H900	H900
Ferrite %	Ferrite %	0.2% P	UTS	A4D	RA	Ferrite %	Ferrite %	0.2% P	UTS	A4D	RA	Ferrite %	Ferrite %	0.2% P	UTS	A4D	RA
Intergranular Corrosion Test																	
Bend																	
Ovality																	
Microstructure																	
Macrostructure																	

**Additional Information**  
Delta Ferrite - 0.43%  
Rp0.2-201ksi UTS 204ksi EI 11.1% RoTA 54% Hb 410  
Free from known Mercury or Radium Contamination  
Conforms with ASME/ASTM A484 & S64, AMS 8822 & S643  
Supplied as Condition A  
Melting Practice- EAP and AOD  
Solution annealed at 1900F +/- 25 for 1.5hrs  
Material free from welds  
Tested in accordance with AMS2630 & 2303, ASTM E407

Material melted and rolled in Sheffield, England by Outokumpu Stainless Ltd.  
Melting Practice- EAP & AOD Ultrasonic to AMS2630 & Magnetic Particle to

ENISO Manager  
*Rob Charlesworth*  
Rob Charlesworth  
Date 04/02/2014

This reference manufacturing certificate is a Quality System  
registered to ISO 9001:2008 and approved by TUV Nord.  
Certificate Registration No. 44 185 18348

From: ThyssenKrupp Materials NA

Cust. AVIBANK MFG INC  
CstAr  
Wgt.: 1,055 LB

Del.: 2403165594

CstOr 757697  
Date 05/20/2014

*John R. Zambetti*

Order No: 3748031  
Time 07:06:05



**FRY STEEL COMPANY**  
Registered ISO 9001  
13325 MOLETTE ST.  
SANTA FE SPRINGS, CA 90670  
(562) 802-2721

A08040  
Cust. NO.: 760385  
P.O. NO.:

## CERTIFICATE OF COMPLIANCE

AVIBANK MFG INC  
ATTN: ACCTS PAYABLE  
P O BOX 9909  
NORTH HOLLYWOOD CA 91609-1909

AVIBANK MFG  
11500 SHERMAN WAY  
\*\*\*RECEIVING CLOSED 11:30-12\*\*  
NORTH HOLLYWOOD CA 91605-5827

04/23/14

QTY	-DESCRIPTION-	-ITEM CODE-	-HEAT NUMBER-
	✓ CG 17CR 4NI PPT HT SOL TR PH AMS 5643 SILVER/RED		
250	✓ BARS .130"RD 12'RL	9070	E131099 ✓
440	BARS .1925"RD 12'RL	9120	E130790
75	BARS .505"RD 12'RL	9380	G20854
75	BARS .630"RD 12'RL	9450	571176
25	BARS .755"RD 12'RL	9510	571616

### CERT REVIEW

MAIN LOT # 1438754  
COMPONENT LOT # 1435371  
NAME Spindle

### NOTICE

A COPY OF THE ORIGINAL MILL CERTIFICATION IS ATTACHED\*

CHEMICALS & PHYSICALS ARE REPORTED THAT WILL MEET THE SPECIFICATIONS SHOWN ON THE CERTIFICATE.  
EXCEPTIONS TO SPECIFICATIONS SHOULD BE SHOWN ON THE CERTIFICATION.

AUTOMATIC EXCEPTIONS TO THE SPECS LISTED ARE: LINE MARKING AND INSPECTION (I.E. MAG., SONIC, ETC.)

WE SUGGEST CONSULTING AN EXPERT ABOUT RELATED INSPECTION, PRIOR TO ALTERING THE MATERIAL FROM THE AS SHIPPED/RECEIVED  
CONDITION. "DEFECT FREE" MATERIAL CAN NOT BE GUARANTEED WITHOUT PRIOR INSPECTION APPROPRIATE TO APPLICATION.

NO WELD REPAIR HAS BEEN PERFORMED AND THIS MATERIAL IS FREE FROM MERCURY AND RADIUM  
CONTAMINATION AT TIME OF SHIPMENT

The willful recording of false, fictitious or fraudulent statements on this document may result as a felony under federal statutes.  
\*WHEN APPLICABLE

**- TO THE BEST OF OUR KNOWLEDGE MATERIAL IS CONFLICT MINERAL FREE -**



Q. C. Review  
Sig. *[Signature]*  
Date 4/29/14  
Lot # 1436397

*[Signature]*  
CHIP SANDOVAL - Q.C. MANAGER

FRY STEEL CO. CERTIFIES THAT THIS IS  
A TRUE COPY OF THE ORIGINAL MILL TEST  
REPORT NOW ON FILE  
RECEIVED AND INSPECTED

**TRI STAR METALS, LLC**  
375 VILLAGE DR.  
CAROL STREAM, IL 60188  
An ISO 9001:2008 Registered Company

FEB 10 2014

*Chip Sandoval*  
CHIP SANDOVAL - Q.C. MANAGER

CERTIFICATE DATE: 02/07/14 CUSTOMER: FRY STEEL COMPANY  
ORDER#: 205486 CUSTOMER PO#: 47795-1  
MATERIAL: 17-4PH ✓ DESCRIPTION: .130" RD SS X 12" ✓  
HEAT NUMBER: E131099 QTY. SHIPPED: 2,003 LBS  
CONDITION: A - Solution Annealed, A.Q., Centerless Ground PART #: 9070

**CHEMICAL COMPOSITION**

C ✓	Mn ✓	Si ✓	S ✓	P ✓	NI ✓	Cr ✓	Mo ✓	Other Elements
.015	.730	.408	.0280	.023	4.68	15.38	.170	✓ Cu=3.349 Co=.089 N=.0310 Ti=.002 ✓ Nb=.2510 Al=.002 B=.0016 Sn=.008 V=.050 W=.020 As=.006 Ca=.001 Ta=.002 Pb=.0002

**MECHANICAL VALUES**

TENSILE (KSI)	YIELD (KSI)	ELONGATION (%)	REDUCTION OF AREA (%)	HARDNESS
146	136	9	47	301 HB

**AFTER HT CAPABILITIES 900F 1 HOUR AIR COOL**

TENSILE (KSI)	YIELD (KSI)	ELONGATION (%)	REDUCTION OF AREA (%)	HARDNESS
201	199	12	54	410 HB

**ADDITIONAL REMARKS:**

This material meets the specifications for: STRAND ANNEALED AT 1900F FOR 4 TO 8 MIN;  
AMS 5643R, AMS 2303E; ASTM A484-10; Capable of ASTM A564-04 TYPE 630, ASME A564-04  
TYPE 630, & MBO-160-003 EXC HARDNESS & ULTRASONIC; DFARS 252.225.7014 & 225.7002-  
3(b) (1) COMPLIANT; Delta Ferrite=.38%; Micro & Macro Structures OK per AMS 5643

MATERIAL IS FREE FROM MERCURY CONTAMINATION. EN10204 3.1.B  
MELT ORIGIN: ENGLAND

**MATERIAL IS MANUFACTURED IN THE UNITED STATES OF AMERICA**

I hereby certify that this data is correct as contained in the records of this company.

QUALITY CONTROL REPRESENTATIVE:  
QSD-007 REV. 003 4/17/2013

*James P. Elliott*  
James P. Elliott - Quality Process Manager



Q. C. Review  
Sig. *[Signature]*  
Date 1/30/14

LOT# 1436397

E131099

.130 RD

Order No: 3702738  
Time 16:17:08



**FRY STEEL COMPANY**  
Registered ISO 9001  
13325 MOLETTE ST.  
SANTA FE SPRINGS, CA 90670  
(562) 802-2721

A08040  
Cust. NO.: 755061  
P.O. NO.:

## CERTIFICATE OF COMPLIANCE

AVIBANK MFG INC  
ATTN: ACCTS PAYABLE  
P O BOX 9909  
NORTH HOLLYWOOD CA 91609-1909

AVIBANK MFG  
11500 SHERMAN WAY  
\*\*\*RECEIVING CLOSED 11:30-12\*\*  
NORTH HOLLYWOOD CA 91605-5827

01/17/14

QTY	-DESCRIPTION-	-ITEM CODE-	-HEAT NUMBER-
	✓ CF 2024 AL T4 QQA 225/6 RED		
342	✓ BARS 5/16"RD 12'RL	84030	13M215 ✓
1	BAR 7/16"RD 12'RL	84040	13M215
1	PC 3/8 X 1-1/4"FL CUT 84"LG CUT	86570	10112303-5
	CF 2024 AL T351 QQA 225/6 RED		
1	PC 1-1/8"RD CUT 60"LG CUT	84090	152938
5	BARS 1-3/16"RD 12'RL	84095	13M215
	EXT 2024 AL T3511 QQA 200/3 RED/WHITE STRIPE		
3	BARS 5/8"RD 12'RL CONTINUED...	85810	ZWB120934

### CERT REVIEW

MAIN LOT # 7438754  
COMPONENT LOT # KB 30691  
NAME Buttler

### NOTICE

A COPY OF THE ORIGINAL MILL CERTIFICATION IS ATTACHED\*

CHEMICALS & PHYSICALS ARE REPORTED THAT WILL MEET THE SPECIFICATIONS SHOWN ON THE CERTIFICATE.  
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CONDITION. "DEFECT FREE" MATERIAL CAN NOT BE GUARANTEED WITHOUT PRIOR INSPECTION APPROPRIATE TO APPLICATION.

NO WELD REPAIR HAS BEEN PERFORMED AND THIS MATERIAL IS FREE FROM MERCURY AND RADIUM  
CONTAMINATION AT TIME OF SHIPMENT

The willful recording of false, fictitious or fraudulent statements on this document may result as a felony under federal statutes.  
\*WHEN APPLICABLE

-- TO THE BEST OF OUR KNOWLEDGE MATERIAL IS CONFLICT MINERAL FREE --



Q. C. Review  
Sig. Namalye  
Date 2/7/14

Chip Sandoval  
CHIP SANDOVAL - Q.C. MANAGER

Lot# 1410845



7/16/13

13M215

# Aluminium Mill Certificate



Taishan City Kam Kiu Aluminium Extrusion Co. Ltd  
Address: Daijiang County, Taishan, Guang Dong, China  
Tel: (86) 7505438596 Fax: (86) 7505438173

Cert. No.: KAP628824

Customer: TUSKER INTERNATIONAL TRADING INC. FRY STEEL

Contract No.: US SM130929

Alloy Temper 2024-T4

Container No: CBHU5883403/20

2024-T4

Standards: QQA 225/6 REV E; AMS QQA 225/6 REV A; ASTM B 211 2012; AMS 4120 REV R

Shipment Date: Jul 29 2013

PO No: 47540 1K

Invoice No: MJ31492

Product Code	Die No	Specification	2024 Chemical Composition (%)														Tensile Strength		Yield		Elongation	
			Heat No (Batch No.)	Cast No.	Si	Mg	Fe	Cu	Mn	Zn	Cr	Ti	Pb	Bi	Zr	Al	N/mm <sup>2</sup>	ksi	N/mm <sup>2</sup>	ksi	%	%
84000	JE70361-5	DRAWN ROD	CFR 5/16	13M215	0.100	1.486	0.292	4.453	0.765	0.018	0.024	0.013	0.006			Rem.	557	81.0	523	78.0	11.8	
84000	JE70361-5	DRAWN ROD	CFR 7/16	13M215	0.100	1.486	0.292	4.453	0.765	0.018	0.024	0.013	0.006			Rem.	481	70.0	423	81.0	10.8	

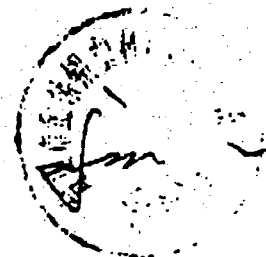
## Remark:

Kam Kiu Aluminium Group hereby certifies that metal shipped under the above mentioned PO No, Contract No, and Container No has been inspected and tested, and found in conformance with the applicable specifications forming a part of the description set forth in Kam Kiu's Sales Contract. This Mill Test Certificate complies to 3.1 EN 10204.

Made By:

Waley

Checked By:



Q. C. Review  
Sig. Name  
Date 7/7/14

Lot# 1410845

FRY STEEL CO. CERTIFIES THAT THIS IS  
A TRUE COPY OF THE ORIGINAL MILL TEST  
REPORT NOW ON FILE  
RECEIVED AND INSPECTED

AUG 23 2013

BY

CHH BANHOVAL - Q.C. MANAGER

Level 18, The Gardens North Tower, Mid Valley City, Lingkaran Syed Putra, 59200 Kuala Lumpur, Malaysia  
E-mail: info@kamkiu.com Web Page: www.kamkiu.com

CFR 5/16

CFR 7/16

K & L Anodizing Corporation  
**Certification**

Order No.: 317168

Date: 04/17/2014

Entry Date: 03/31/2014

Page: 1 of 1

**To:**

Avibank Mfg. Inc.  
11500 Sherman Way  
P.o. Box 9909  
North Hollywood CA 91609-1909

Purchase Order No.: 759178

Packing List No.:

Material: 2024-T4

309570

We are pleased to provide you with the following Certification. The item(s) described were finished and accepted in accordance with the stated specification  
Nadcap Accredited

Quantity	Part Number / Part Name / Part Description	Pounds
5,200	73-4AB Rev. D Button	

Mil-A-8625 Rev.F Amend. 1 KLC 001 / KLC 0007  
Anodize per Mil-A-8625 Rev. F Am. 1 Type II Class 2 Blue.  
Mercury Contamination Free


Insp. Type	Scale	Minimum	Maximum	Number	Other
<b>Customer Requirements:</b>					
Visual				Sample or 100%	

LSS# 200

Notice: All finishing completed by K & L Anodizing will carry a liability not to exceed the amount of the finishing charges for the work done on any material. The only exception shall be by written agreement signed by both parties.

**CERT REVIEW**

MAIN LOT # 1438754  
COMPONENT LOT # 213 30691  
NAME Button

  
Q. C. Review  
Sig. [Signature]  
Date 4/21/14  
Lot # 1434187

Nadcap AS7003 #4908143853 10/31/2015  
Nadcap AC7108 #4908153454 10/31/2014

[Signature]  
Luisa Sagory  
Cert Control  
K & L Anodizing Corp.

# Gibbs Certificate of Analysis

Gibbs Wire & Steel Company, Inc. 3751 Olive Road, South Bend, Indiana 46628

AVIBANK MFG INC.  
11500 SHERMAN WAY  
NO. HOLLYWOOD CA 91605 USA

Date Shipped: 2/26/2014  
Cust Order #: 757236  
Amount Shipped: 25.00

Description: 0.0180" P/M.0004 ✓  
17-7 PH COND. C GIBBSCOTE STAINLESS STEEL ✓

Heat Number: 61138

Mill Coil ID:

Gibbs Coil ID:

Gibbs Number: 27175

To Certify that the material shipped against your above order number is in accordance with

Specification: ASTM A313-10 AMS 5678F ✓ TYPE 631

C: 0.0760 ✓	Mn: 0.7900 ✓	P: 0.0220 ✓	Sul: 0.0010 ✓
Si: 0.2400 ✓	Cr: 16.4000 ✓	Ni: 7.6500 ✓	Mo: 0.1400 ✓
Co:	Cu: 0.1200 ✓	N2:	Fe:
Ti:	Al: 0.8800 ✓	Be:	W:
Zn:	Sn:	Pb:	Cb:
Ta:	V:		

## PRE-HEAT

## POST-HEAT

	MIN	MAX	MIN	MAX
Tensile Strength:	286,000	289,000	347,000	348,000
Condition CH900:				
Mill Source/Rod Source:	SUMIDEN		SWEDEN	
Reduction of Area:				

MATERIAL FREE FROM MERCURY CONTAMINATION  
COILING & WRAP TEST GOOD  
DFARS COMPLIANT

Alison Fink

Gibbs Wire & Steel Company, Inc.  
Certification Clerk

Allison Fink

## CERT REVIEW

MAIN LOT # 1438754  
COMPONENT LOT # KB40063  
NAME Spring

GWS #: 664286

Tel: (574)234-6071; Fax: (574)237-0712



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXaerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
6	200	EA	CR3213-4-03		87484144	CHERRY AEROSPACE SAN	11815		

  
\_\_\_\_\_  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15



**CHERRY®**  
**AEROSPACE**  
 SPS Fastener Division, a PCC Company

Cherry Aerospace  
 1224 East Warner Avenue  
 Post Office Box 2157  
 Santa Ana, CA 92707-0157  
 USA



# PACKING LIST

Order No: S0321670  
 Order Date: 04/29/08  
 Print Date: 05/24/11

Page: 1



Sold-To: 10015341

Ship-To: 19000244

S O L D T O	B/E AEROSPACE
	PO BOX 025263
	MIAMI, FL 33102-5263
	USA

S H I P T O	B/E AEROSPACE INC C.M.
	10000 N.W. 15TH TERRACE
	MIAMI, FL 33172
	USA

Salesperson (s):110

Purchase Order: 0EZ574

Credit Terms: Net 30  
 Net 30

Ship Via: YRC

FOB: Origin - Collect

## Remarks:

IF UNDER 150# SHIP FEDEX GROUND COLLECT ACCOUNT# 0331-0149-0  
 IF OVER 150# SHIP FED EX NATIONAL ACCOUNT# 018757 - DO NOT INSURE  
 DO NOT PREPAY AND ADD TO ANY OF THE ABOVE METHODS  
 DO NOT SHIP EARLIER THAN TWO (2) WEEKS PRIOR TO DUE DATE, UNLESS SPECIFIED.

\*\*\*\*\*  
 BRITISH AEROSPACE APPROVAL# BAe/AG/30158/MAA to BAe/AG/QC/SC1 PART 3  
 AIRBUS APPROVAL# 30114  
 \*\*\*\*\*

GOODS OF UNITED STATES ORIGIN  
 \*\*\*\*\*

**TEST REPORTS ENCLOSED**

FASTENERS ECCN: 9A991d SCHEDULE B# 8803300010  
 TOOLS ECCN: EAR99 SCHEDULE B# 8467290095

**DO NOT DESTROY**

Ln	Item Number	Site T LocationLot/Serial	Qty Open Qty to Ship UM	Promised Shipped	
17	CR3213-4-03 Customer Item: ASNA0078A403 B0207005-4-03 CAN43078B4-3 M7885/2-4-03 NAS9301B-4-03 NAS9301BNS-4-03 *IF APPLICABLE, PART MEETS DFARS CLAUSE 252.225-7014 ALT I *PREFERENCE FOR DOMESTIC SPECIALTY METALS	1600		EA	07/15/11
		C0503 87466045	32095.0	( )	
		C0903 87466042	34600.0	( )	
		D0402 87466024	33895.0	( )	

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited

## CERTIFICATION

## ATTENTION: PURCHASING DEPARTMENT

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications. Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

Quality Assurance Representative

Signed

SIM NGUYEN



**CHERRY®**  
**AEROSPACE**

SPS Fastener Division, a PCC Company

Cherry Aerospace  
1224 East Warner Avenue  
Post Office Box 2157  
Santa Ana, CA 92707-0157  
USA



# PACKING LIST

Order No: S0321670  
Order Date: 04/29/08  
Print Date: 05/24/11

Page: 2



Sold-To: 10015341

Ship-To: 19000244

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B/E AEROSPACE  
PO BOX 025263  
MIAMI, FL 33102-5263  
USA

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B/E AEROSPACE INC C.M.  
10000 N.W. 15TH TERRACE  
MIAMI, FL 33172  
USA

Ln	Item Number	Site T Location	Lot/Serial	Qty Open Qty to Ship	UM	Promised Shipped
17						
			D0403 87466034	29000.0	( )	
			EZLINE-2 87479181	33400.0	( )	
			F0904 87466032	35000.0	( )	
			G0404 87479187	31025.0	( )	
			I0502 87466027	34656.0	( )	
			O0301 87466028	34126.0	( )	
18	CR3213-4-03	1600			EA	07/15/11
	Customer Item: ASNA0078A403					
	B0207005-4-03					
	CAN43078B4-3					
	M7885/2-4-03					
	NAS9301B-4-03					
	NAS9301BNS-4-03					
	*IF APPLICABLE, PART MEETS DFARS CLAUSE 252.225-7014 ALT I					
	*PREFERENCE FOR DOMESTIC SPECIALTY METALS					
			B0505 87484144	33519.0	( )	
			C0205 87487497	32496.0	( )	
			D0705 87466026	31800.0	( )	
			EZ LINE 87487495	34217.0	( )	
			EZ LINE 87488616	33740.0	( )	
			EZLINE-2 87466025	33500.0	( )	

**TEST REPORTS ENCLOSED**  
**DO NOT DESTROY**

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## ATTENTION: PURCHASING DEPARTMENT

Quality Assurance Representative

Signed

SIM NGUYEN



**CHERRY®**  
**AEROSPACE**

SPS Fastener Division, a PCC Company

Cherry Aerospace  
1224 East Warner Avenue  
Post Office Box 2157  
Santa Ana, CA 92707-0157  
USA



# PACKING LIST

Order No: S0321670

Page: 3

Order Date: 04/29/08

Print Date: 05/24/11



Sold-To: 10015341

Ship-To: 19000244

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B/E AEROSPACE  
PO BOX 025263  
MIAMI, FL 33102-5263  
USA

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B/E AEROSPACE INC C.M.  
10000 N.W. 15TH TERRACE  
MIAMI, FL 33172  
USA

Ln	Item Number	Site T Location Lot/Serial	Qty Open Qty to Ship	UM	Promised Shipped
18		EZLINE-2 87487496	34028.0	( )	
		H1002 87487494	32300.0	( )	
		L0402 87487493	34400.0	( )	
19	CR3213-4-03	1600		EA	07/15/11
	Customer Item: ASNA0078A403				
	B0207005-4-03				
	CAN43078B4-3				
	M7885/2-4-03				
	NAS9301B-4-03				
	NAS9301BNS-4-03				
	*IF APPLICABLE, PART MEETS DFARS CLAUSE 252.225-7014 ALT I				
	*PREFERENCE FOR DOMESTIC SPECIALTY METALS				
		C0405 87466035	34241.0	( )	
		EZ LINE 87466029	34360.0	( )	
		EZ LINE 87466044	33200.0	( )	
		EZ LINE 87485861	33167.0	( )	
		EZLINE-2 87466021	31247.0	( )	
		L0102 87484141	33180.0	( )	
		L0202 87466048	34709.0	( )	
		N0203 87466049	33820.0	( )	
		N0403 87466030	32375.0	( )	

**TEST REPORTS ENCLOSED**  
**DO NOT DESTROY**

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited

## CERTIFICATION

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications. Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

## ATTENTION: PURCHASING DEPARTMENT

Quality Assurance Representative

Signed

SIM NGUYEN

**CHERRY** AEROSPACE1224 East Warner Avenue  
Santa Ana, CA 92707-0157Accredited Chemical Processing  
Heat Treating  
ISO/IEC 17025  
Material Testing Lab**Final Inspection & Test Report****CherryMax® Rivet****An ISO9001 and AS9100 registered company. OASIS #6111041606**

Part Numbers	Rev	Proc. Spec.	Rev	<b>Lot I.D. No.:</b> <b>87484144</b>  <b>Lot Size:</b> <b>35,000</b>  <b>MFG. Date:</b> <b>April 27, 2011</b>
CR3213-4-03	AA	PS-CMR-3000	R	
** See 2nd Page for the Customer Parts				

**ASSEMBLY DATA**

TYPE	ID #	CERT #	MATERIAL	FINISH	LUBE
Rivet	87466046	A65901	QQ-A-430/5056	MIL-C-5541 CLEAR CL1A	None
Stem	87480902	A66558	AMS6322 / 8740ST	QQ-P-416/T2CL2/CAD PL	None
Collar	00000000	A66909	A-286 / AMS5731	Passivate per AMS2700	None

W.O. #: 5434116

Final Lube: None

**QUALITY CONFORMANCE/ACCEPTANCE RESULTS**

MIN REQ'D SAMPLE SIZE SPECS	INSTALLED SHEAR		TENSION		SPINDLE RETENTION			DISASSEMBLY
	584		285		125			10
	8	N/A	8	N/A	5	8	N/A	5
	C-N-M	B	C-N-M	B	C-N-M	M	B	C-N-M
RESULTS	872		416		293	274		38
	891		399		292	271		69
	867		414		318	271		33
	987		414		295	254		32
	920		419		327	278		24
C=CR N=NAS	920		414			267		
M=MIL B=BAC	916		413			282		
LOAD VALUES IN POUND	873		421			262		

PCS.ITEMSTATUSPCS.ITEMSTATUS20

EXAMINATION

PASS

20

INSTALLATION (Min and Max Grips)

PASS

**Comments:**

Blind Fastener

Tr. Rev: -

Rev. Date: 4/27/2011

Inspector

I Reyes

**Q Code****V09**

The parts contained in this shipment have been manufactured and inspected in accordance with TSO-C148. The conditions and tests required for TSO approval of this article are minimum performance standards. Aircraft fasteners approved under this TSO are not necessarily interchangeable with other aircraft fasteners approved under this TSO. Fasteners of similar dimensional properties may have widely varying performance and metallurgical properties. Substitution of parts may only be done if acceptable to or approved by the Administrator.

This test report shall not be reproduced except in full, without the written approval of the laboratory.

The recording of false, fictitious, or fraudulent statement or entries on the certificate may be punished as a felony under Federal law.



## KAISER ALUMINUM

**SANTA ANA, CA 92705-5414**

		ULTIMATE		YIELD		% ELONGATION	
LOT NUMBER	# OF TESTS	STRENGTH K.S.I.		STRENGTH K.S.I.			
		Min	Max	Min	Max		
K845426 ✓	2	48.57 ✓	49.41				



DEC 16 2010

K845426



**A65901**

CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		OTHERS	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
	5056		0.30		0.40		0.10	0.05	0.20	4.50	5.60	0.05	0.20	0.05	0.15
		NICKEL		ZINC		TITANIUM		LEAD		BISMUTH					
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
					0.10										
		ALUMINUM REMAINDER													

# **KAISER**

## **ALUMINUM**

### **FABRICATED PRODUCTS**

Kaiser Aluminum & Chemical  
600 Kaiser Drive  
Heath, OH 43056-1088  
740-522-1151

*Best in Class*

## **CERTIFIED TEST REPORT**

<http://Certs.KaiserAluminum.com>

### **Specifications**

QQA-430 REV C

### **Miscellaneous Notes**

Made in USA

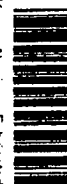
Product produced from K540 meets the requirements of aluminum alloy 5056

Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. Actual (Act) chemical composition is from representative samples taken during the ingot casting process. Independent chemical analysis will vary from these values because of natural variation in the process and testing error. This test report shall not be reproduced, except in full, without the written approval of Kaiser Aluminum. The recording of false, fictitious, or fraudulent statements or entries on the certificate may be punished as a felony under federal law. Chemical analysis performed in accordance with ASTM E 1251-07. The Newark facility is AS9100B:2004 approved. The Newark Laboratory is NADCAP approved for chemical testing (OES).



DEC 16 2010

Kaiser Aluminum Fabricated-  
K945428



A65901

### **CERTIFICATION**

Kaiser Aluminum & Chemical Corp Inc. ("Kaiser") hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales order acknowledgement form. Any warranty is limited to that shown on Kaiser's standard general terms and conditions.

John R. Despins, Technical Manager

*John R. Despins*

Plant Serial: 10125

Kaiser Order Number: 214520770

Page 2 of 2

Line Item: 1



**WireTech, Inc.**

6440 E. Canning Street  
Los Angeles, CA 90040  
Phone (323) 722-4933  
Fax (323) 721-2738

SOLD TO

**CHERRY AEROSPACE LLC**  
1224 E. WARNER AVENUE  
SANTA ANA, CA 92705-5414  
USA

WORK ORDER  
**081247**

**CERTIFICATION**

HEAT NO.  
10070600  
SALES ORDER / RLS  
**838224 / 1**

ISO 9001-2000 REGISTERED



MECHANICAL TESTING  
CERT # 011.01

CUSTOMER P.O. <b>VPO092778</b>	CUSTOMER PART <b>M272.1040</b>	QUANTITY <b>2,934 Lbs</b>	CARRIERS <b>3</b>	LADING NO <b>00088452</b>	SHIPMENT DATE <b>02/22/2011</b>			
<b>SPECIFICATION C208740-101040A</b> <b>A-8740, AQ, SKFG, CHQ WIRE, SEAM &amp; DECARB FREE, SAIP Zinc Phosphate, Lime &amp; Stearate Coating,</b> <b>Size:0.103/0.105 Specifications: AMS2301H, AMS6322N, MIL-S-6049A, AMEND1, ASTM-A-547, AMS-S-6049-A, M</b> <b>272.1040 REV. P.</b>								
<b>CERTIFICATION REQUIREMENTS</b>								
<b>Chemical Properties</b>								
<b>C</b>	<b>Si</b>	<b>Mn</b>	<b>P</b>	<b>S</b>	<b>Cu</b>	<b>Ni</b>	<b>Cr</b>	<b>Mo</b>
<b>.41</b>	<b>.25</b>	<b>.96</b>	<b>.009</b>	<b>.008</b>	<b>.12</b>	<b>.42</b>	<b>.42</b>	<b>.21</b>
<b>Physical Properties</b>								
<b>Grain Size</b>	<b>Jominy 1</b>	<b>Jominy 2</b>	<b>Jominy 3</b>	<b>Inclusions</b>	<b>Macro</b>	<b>Cleanliness</b>	<b>Mill Source</b>	
<b>6 J5=52</b>	<b>J8=41</b>	<b>J10=36</b>	<b>S2-R1-C2</b>	<b>GOOD</b>	<b>F&amp;S=0</b>	<b>Charter</b>		
<b>Country of Origin</b>								
<b>USA - DFAR Compliant</b>								
<b>Mechanical Properties</b>								
<b>TEST</b>	<b>UNITS</b>					<b>Results</b>		
<b>Tensile Strength</b>	<b>KSI</b>					<b>130.0</b>		
<b>Yield Strength</b>	<b>KSI</b>					<b>110.5</b>		
<b>% Elongation</b>	<b>%</b>					<b>6</b>		
<b>% Reduction of Area</b>	<b>%</b>					<b>60.9</b>		
<b>Rockwell Hardness C Scale</b>	<b>HRC</b>					<b>28</b>		
<b>Decarb (Total)</b>	<b>In</b>					<b>0.00</b>		

A66558  
 WireTech  
 10070600

**MAR 19 2011**

Merchandise covered by this invoice is warranted to be free from defects in workmanship or material but not for any specific length of time, type or measure of service. No claim for allowance will be recognized unless presented in writing within 10 days time after receipt of material. Our maximum liability for any claim predicated upon defective merchandise is limited to replacement of it, or to repayment of it, or to repayment of the purchase price thereof, as we elect. Material cut to specific length or size cannot be returned for credit and request for cancellation of such orders will not be considered if manufacture has been commenced. Buyer, by acceptance of the merchandise covered by this invoice, agrees to the foregoing terms and conditions and those set forth on the reverse hereof. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal statutes including Federal law, Title 18, Chapter 47.

REPRODUCTION OF THIS CERTIFICATION IS NOT ALLOWED UNLESS IN FULL.

Wire Tech, Inc. metallurgical laboratory is accredited in the following test: chemical analysis per ASTM E 415, mechanical testing per ASTM A 370, Rockwell hardness per ASTM E 18, metallographic mount preparation per ASTM E 3, decarburization depth per ASTM E 1077, IFI 140, Inclusion rating per ASTM E 45, decarburization performed as per IFI 140. The reported Chemical and Physical Properties are Melt Source results. Transcribed from mill certificates. HRB(W) are hardness results performed with a 1/16" carbide ball. Unless otherwise specified, HRB and HRC results are conversions from ASTM A370 tables 1 and 2. \*Test result not covered by our current A2LA accreditation. Tests which have been undertaken by a subcontractor laboratory that is not accredited are not endorsed by A2LA or covered by Wire Tech, Inc. A2LA accreditation.

TEST RESULTS RELATE ONLY TO THE ITEMS TESTED.

"LATEST REVISIONS OF ASTM"

Material is free of mercury, radium, or alpha contamination.

*Handwritten signature*

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled, and processed in the United States.
2. Mercury was not used during the manufacture of this product, nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	CSSM	Charter Steel Melting Division	1653 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSSR/CSSP	Charter Steel Rolling/Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	CSFP	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSCM/CSCR	Charter Steel Cleveland	4300 E. 49th St., Cuyahoga Heights, OH 44125-1004
.	.	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSSM, CSCM/CSCR	ASTM E415; ASTM E1019
X-ray Fluorescence Stainless and Alloy Steel	CSCM/CSCR	ASTM E572
Macroetch	CSSM, CSCM/CSCR	ASTM E381
Hardenability (Jominy)	CSSM, CSCM/CSCR	ASTM A255; SAE J406; JIS G0561
Grain Size	CSSM	ASTM E112
Tensile Test	CSSR/CSSP, CSFP, CSCM/CSCR	ASTM E8; ASTM A370
Rockwell Hardness	All labs	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSSR/CSSP, CSFP	ASTM A892
Inclusion Content (Methods A, E)	CSSR/CSSP, CSCM/CSCR	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/11.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgement (designated by our Sales Order number) to the customer's purchase order. Both order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.

MAR 19 2011



A66558  
 Wire Tech  
 10070600

# Certificate of Analysis

Radcliff Wire Inc. 97 Ronzo Rd., P.O. Box 603, Bristol, CT 06010

Date Shipped: 4/11/2011

PO #: P0124411

Qty. Shipped: 27 LBS-2-BLACK  
MIG SPOOLS

Radcliff No.: 120614

Heat No.: Z1375MK13

Customer: CHERRY AEROSPACE  
SANTA ANA OPERATIONS  
1224 EAST WARNER AVE  
SANTA ANA, CA 92705-5414

Country of Origin: USA

Original Mill Source: USA

Size: .006 X .011 X .056 \*\*\*

Material: A286 Stainless Steel

Description: SPECIAL SHAPE

Specification: AMS 5731 REV L, AMS 5737 REV P  
CHEM ONLY

## Chemical Properties

Al: 0.17%	B: 0.006%	Bi: PPM<0.1%	C: 0.04%	Co: 0.06%
Cr: 14.57%	Cu: 0.06%	Fe: 56.57%	Mn: 0.11%	Mo: 1.26%
Ni: 24.52%	P: 0.007%	Pb: PPM0.3%	S: 0.003%	Si: 0.18%
Ti: 2.14%	V: 0.3%			

## Notes:

PART# M189.44 REV W  
DFAR COMPLIANT  
NET WGT 27 LBS

RADCLIFF WIRE, INC.  
Z1375MK13



A66909

APR 23 2011



Tensile: 97 KSI

Rockwell:

Certs/Material

Lisa Platek

Certification Clerk

The material as shipped is free from mercury contamination

**HUNTINGTON ALLOYS CORPORATION**  
*A Special Metals Company*

NOTE: THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTE.

WESTERN U.S.

P

HUNTINGTON, WEST VIRGINIA 25705-1771

<b>A-1 WIRE TECH</b> <b>840 AIRPORT DR</b> <b>ROCKFORD, IL 61109</b>	<b>CERTIFIED MATERIAL TEST REPORT</b>		<b>No. 84052</b>
	HA ORDER NO./ITEM 300018997 1	DATE 06/24/09	PAGE OF 1 3
	QUANTITY 7332 LBS	INSPECTED BY HA/SMC	
	CHARGE ORDER NO. 22351-2	MARK ORDER NO. 22351-2	
<b>A-1 WIRE TECH INC</b> <b>4550 KISHWAUKEE ST</b> <b>ROCKFORD IL 61109</b>	DESCRIPTION OF MATERIAL SHIPPED INCOLOY ALLOY A-286 VIN-ESR HR ROD - COIL PKL ANN .3120 IN COIL COIL		

THIS IS TO CERTIFY THAT ALL REQUIRED SAMPLING INSPECTIONS AND TESTS HAVE BEEN PERFORMED IN ACCORDANCE WITH THE ORDER AND SPECIFICATION REQUIREMENTS. THE TEST REPORT REPRESENTS THE ACTUAL ATTRIBUTES OF THE MATERIAL FURNISHED AND THE VALUES SHOWN ARE CORRECT AND TRUE. THE MATERIAL DESCRIBED BY THIS CERTIFICATE IS IN FULL COMPLIANCE WITH ALL ORDER AND INSPECTION REQUIREMENTS. WE HEREBY CERTIFY THAT THE BELOW FIGURES ARE IN ACCORDANCE WITH THE SPECIFIED CONTRACT REQUIREMENTS.

REV. 808

\*\*\*\*\*THIS REPORT RELATES ONLY TO THE ITEM(S) TESTED AND MAY NOT BE REPRODUCED EXCEPT IN FULL.\*\*\*\*\*

**SPECIFICATIONS:** A-1 A286 RESTRICTED FOR CUST 187, 1250, 211 REV 9-30-08\  
 SAE AMS 5731L CHEM ONLY\SAE AMS 5732J CHEM ONLY\  
 SAE AMS 5734K CHEM ONLY\SAE AMS 5737N CHEM ONLY\  
 SAE AMS 5726D CHEM ONLY\GE C50TF35-S4 AM 7 CLASS A CHEM ONLY\  
 SPS-M-118 REV L CHEM ONLY\GE S-400 (10-31-07)\  
 GE S-1000 (1-2-2008)\  
 HEAT TREAT & STRESS RUPTURE CAPABILITY TESTING\  
 QUALITY SYSTEM CERTIFICATION: ISO 9001:2000 (ABS-QE CERT. 30125);  
 EN 10 204/DIN 50049 (TYPE 3.1)

UNS:S66286

**A66909**



RADCLIFF WIRE, INC.-  
Z1375MK13

**CHEMICAL ANALYSIS (WT. X)**

HEAT#	C TI	MN CO	FE MO	S P	SI B	CU PB/PPM	NI BI/PPM	CR V	AL
Z1375MK	0.04 2.14	0.11 0.06	56.57 1.26	0.003 0.007	0.18 0.006	0.06 0.3	24.52 <0.1	14.57 0.30	0.17

TO CONVERT PPM TO WT.X, MOVE DECIMAL POINT FOUR PLACES TO THE LEFT.  
 MELT METHOD: VIN + ELECTROSLAG REMELTED

APR 23 2011



**MECHANICAL PROPERTIES**

HEAT/LOT	QUANTITY	HARD NESS	GRAIN SIZE	YIELD .2XPSI	TENSILE PSI	XELG	R/A X	DEG F	
Z1375MK									
ROOM TEMP-	-CAPABILITY **			1022	1595	28.1	51.5		HEAT TREAT #2
ROOM TEMP-	-CAPABILITY **			1113	1647	26.8	49.1		HEAT TREAT #1
HARDNESS -HRC	-CAPABILITY	29.7							HEAT TREAT #1
HARDNESS -HRC	-CAPABILITY	27.6							HEAT TREAT #2
STRESS RUPTURE-CAPABILITY				1200 DEG F/	75,000 PSI	STRESS/	062.0 HRS /	9.8XEL IN 4D	/16.2XRA/

HUNTINGTON ALLOYS CORPORATION  
A Special Metals Company

HUNTINGTON, WEST VIRGINIA 25705-1771

NOTE: THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT  
STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE  
AS A FELONY UNDER FEDERAL STATUTE.

WESTERN U.S.

P

A-1 WIRE TECH 840 AIRPORT DR ROCKFORD, IL 61109	<b>CERTIFIED MATERIAL TEST REPORT</b>		<b>No. 84052</b>	
	HA ORDER NO./ITEM 300018997 1	DATE 06/24/09	PAGE 3	OF 3
A-1 WIRE TECH INC 4550 KISHWAUKEE ST ROCKFORD IL 61109	QUANTITY 7332 LBS	INSPECTED BY HA/SNC		
	CHARGE ORDER NO. 22351-2	MARK ORDER NO. 22351-2		
DESCRIPTION OF MATERIAL SHIPPED INCOLOY ALLOY A-286 VIM-ESR HR ROD - COIL PRL ANN .3120 IN COIL COIL				

THIS IS TO CERTIFY THAT ALL REQUIRED SAMPLING INSPECTIONS  
AND TESTS HAVE BEEN PERFORMED IN ACCORDANCE WITH THE  
ORDER AND SPECIFICATION REQUIREMENTS. THE TEST REPORT  
REPRESENTS THE ACTUAL ATTRIBUTES OF THE MATERIAL  
FURNISHED AND THE VALUES SHOWN ARE CORRECT AND TRUE.  
THE MATERIAL DESCRIBED BY THIS CERTIFICATE IS IN FULL  
COMPLIANCE WITH ALL ORDER AND INSPECTION REQUIREMENTS.  
WE HEREBY CERTIFY THAT THE BELOW FIGURES ARE IN  
ACCORDANCE WITH THE SPECIFIED CONTRACT REQUIREMENTS.

REV. 8/08

"QUALITY SYSTEM MEETS REQUIREMENTS OF DIRECTIVE 97/23/EC (PRESSURE EQUIPMENT DIRECTIVE),  
ANNEX 1, CHAPTER 4.3 PER ABS GROUP LTD CERTIFICATE 41734 (EXPIRES JULY 31, 2011)."

AUTHORIZED QUALITY CERTIFICATION REPRESENTATIVES :  
W.E. BOLEN, P.D. CUSTER, M.A. MORRISON, P. WAUGH, D.K. MILLER

CERTIFIED TESTING LABORATORY DATA SOURCE IAI

AEBG VENDOR NO. 47150

M.R.B. CASE RECORD NO.: NONE

AUTHORIZED VENDOR SIGNATURE

DATE: 06/24/09

APR 23 2011



A66909



RADCLIFF WIRE, INC.-  
Z1375MK13



# A-1 Wire Tech, Inc.

NORTH AMERICA'S PREMIER MANUFACTURER OF HIGH NICKEL & STAINLESS STEEL ALLOYS

4550 Kishwaukee Street  
Rockford, Illinois 61109

## Certified Material Test Report

HEAT/LOT

Load ID. 00080266

Z1375MK13

SOLD TO

Page 1

Radcliff Wire  
97 Ronzo Road  
Bristol, CT 06011-0603  
USA

QUALITY SYSTEMS  
Certificate 3.1 as in EN 10204  
Material manufactured in accordance  
with a quality management system  
certified to ISO 9001:2008 by  
ABS-QE (Certification No. 33373)

SALES ORDER

094922 / 1

Date Printed 08/12/2010

CUSTOMER P.O. 41848	CUSTOMER PART 116566	QUANTITY 381.00	PIECES 3	SHIPMENT DATE 08/12/2010						
PRODUCT: Alloy: A286 Diameter: .034" Temper: 1/8 Hard Finish: . 7662861-034-50-ST										
CERTIFICATION REQUIREMENTS										
*As Shipped Properties										
TEST *Tensile	UNITS ksi	RESULTS 111								
Chemical Analysis %										
C	Mn	Si	P	S	Cr	Ni	Co	Ti	V	Fe
.04	.11	.18	.007	.003	14.57	24.52	.06	2.14	.3	56.57
Cu	Mo	B	Al	Pb	Bi					
.06	1.26	.006	.17	PPM.3	PPM<.1					
Specifications										
*Melt Source DFARS COMPLIANT / MELT SOURCE: HUNTINGTON ALLOYS / COUNTRY OF ORIGIN: USA / MFG: USA										
Specification:										
APR 23 2011										
End of Certification										

A66909  
RADCLIFF WIRE, INC. -  
Z1375MK13

Visual and dimensional examination  
Satisfactory  
Material, when shipped is free from  
contamination by mercury, radium,  
alpha source, and low melting  
point elements.

This is to certify that all required samplings, inspections, operations and tests  
performed by A-1 Wire Tech, Inc. and its subcontractors are in accordance with the  
specification requirements. The test report represents the actual attributes of the  
material furnished and the values shown are correct and accurate. The material  
described by this certificate is in full compliance with all order and inspection  
requirements. We hereby certify that the above data are in accordance with the  
specification requirements.

Suzanne Mullins  
Quality Assurance Manager





# CHARTER STEEL

A Division of  
Charter Manufacturing Company, Inc.

EMAIL

1658 Cold Springs Road  
Saukville, Wisconsin 53080

(262) 268-2400

1-800-437-8789

FAX (262) 268-2570

## CHARTER STEEL TEST REPORT

Reverse Has Text And Codes

Wiretech Incorporated  
6440 East Canning Street  
Los Angeles, CA-90040  
Kind Attn :Cert To Contact

Cust P.O.	6500-5
Customer Part #	8740C1A060-C-R
Charter Sales Order	70010384
Heat #	10070600
Ship Lot #	4025632
Grade	8740 R SK FG AQ 1/4
Process	HRSA
Finish Size	1/4

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies these requirements.


Test Results of Heat Lot# 10070600												
Lab Code: 7388	C	MN	P	S	SI	NI	CR	MO	CU	SN	V	
CHEM												
%Wt	.41	.96	.009	.008	.25	.42	.42	.21	.12	.008	.001	
	AL	N	B	TI	NB							
	.025	.0070	.0002	.002	.002							
JOMINY(HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	58	57	56	54	52	48	44	41	38	36	35	33
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	33	32	31	31	30	29	29	29	28	28	28	28

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
MACRO ETCH SURFACE = 1 MACRO ETCH RANDOM = 1 MACRO ETCH CENTER = 1  
AMS 2301 FREQUENCY AVERAGE = .05 AMS 2301 FREQUENCY INDIVIDUAL = .13  
AMS 2301 SEVERITY AVERAGE = .03 AMS 2301 SEVERITY INDIVIDUAL = .10  
CHEM. DEVIATION EXT. -GREEN =

MAR 19 2011



A66558

Test Results of Rolling Lot# 1012688					
REDUCTION RATIO = 616:1					
Test Results of Processing Lot# 4025411,4025632					
	# of Tests	Min Value	Max Value	Mean Value	
TENSILE	2.0	85.6	86.9	86.3	TENSILE LAB = 0358-02
REDUCTION OF AREA	2	63	65	64	RA LAB = 0358-02
ROCKWELL B	2	82	83	82	RB LAB = 0358-02

NUM DECARB = 1 FREE FERRITE DECARB = .000 FREE FERR & PARTIAL DECARB = .003  
CP SPHERO % LAB = 0358-02 NUM SPHERO = 1 SPHERODIZATION = 80.0

Specifications: Manufactured per Charter Steel Quality Manual Rev 8,12-05-07  
Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = COP 3010 Revision = M Dated = 12-MAR-03

Additional Comments: MEETS REQUIREMENTS OF SPECIFICATIONS AMS8322N/AMS2301J/MIL-S-6049A

Charter Steel  
Saukville, WI, USA



Page 1 of 1

*Janice Barnard*  
Janice Barnard  
Manager of Quality Assurance  
07/07/2010

Rem: Load1,Fax0,Mail0

# KAISER ALUMINUM

FABRICATED PRODUCTS

*Best in Class*

**CERTIFIED TEST REPORT**  
<http://Certs.KaiserAluminum.com>

Kaiser Aluminum & Chemical  
600 Kaiser Drive  
Heath, OH 43056-1088  
740-622-1151

CUSTOMER PO NUMBER: 13216		CUSTOMER PART NUMBER: 6Z37KH		PRODUCT DESCRIPTION: ALY-JUMBO	
KAISER ORDER NUMBER: 214520770	LINE ITEM: 1	SHIP DATE: 07/21/2010	ALLOY: K540	TEMPER: F	
WEIGHT SHIPPED: 38181 lbs.	QUANTITY: 182 pcs.	B/L NUMBER: 6156	DIAM/DAF/THKNS: 0.375 in.	WIDTH: 0.000 in.	LENGTH: 0.0 in.
SHIP TO:  NICHOLS WIRE INC. 1547 HELTON AVE FLORENCE, AL 35630			SOLD TO:  NICHOLS WIRE INC. 1547 HELTON AVE FLORENCE, AL 35630		

Test Code: 4000

## Actual Physical Properties

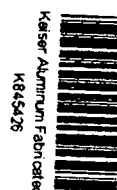
Lot No.

845426 0.0

## Chemical Composition, WT. % (Aluminum Remainder)

Lot	Cast/Drop	ChemID	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
845426										
7-4F2	Act.		0.04	0.06	0.00	0.08	4.7	0.07	0.01	0.01
152296										
Chemical	Min					0.05	4.5	0.05		
Limits	Max		0.30	0.40	0.10	0.20	4.9	0.20	0.10	0.05
			Others	Each	0.05	Max	Total	0.15	Max	

DEC 16 2010



A65901

## CERTIFICATION

Kaiser Aluminum & Chemical Corp Inc. ("Kaiser") hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales order acknowledgement form. Any warranty is limited to that shown on Kaiser's standard general terms and conditions.

John R. Despina, Technical Manager

*John R. Despina*

Plant Serial: 10125

Kaiser Order Number: 214520770

Page 1 of 2

Line Item: 1

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
 Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
 www.KLXaerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


## Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
8	200	EA	CR3242-4-02		87107710	CHERRY AEROSPACE SAN	11815		

  
 Jason Lewis  
 Senior Director, Global Quality

01/20/15

Inv # 01/20/15



**CHERRY®**  
**AEROSPACE**  
 SPS Fastener Division, a PCC Company

Cherry Aerospace  
 1224 East Warner Avenue  
 Post Office Box 2157  
 Santa Ana, CA 92707-0157  
 USA



# PACKING LIST

Order No: S0322236  
 Order Date: 05/06/08  
 Print Date: 10/31/08

Page: 1



Sold-To: 10017870

Ship-To: 10041884

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HONEYWELL INTERNATIONAL INC.  
 ATTN: ACCTS PAYABLE  
 PO BOX 981157  
 EL PASO, TX 79998  
 USA

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HONEYWELL INC. HPG  
 ALLIANCE GATEWAY 54  
 700 HENRIETTA CREEK RD  
 ROANOKE, TX 76262  
 USA

Salesperson (s):106

Purchase Order: 903710



Credit Terms: net 30  
 Net 30

Ship Via: YELLOW

FOB: Origin - Collect

Remarks:

FASTENERS ECCN: 9A991d, SCHEDULE B# 8803300010

Ln	Item Number	Site T Location	Lot/Serial	Qty Open Qty to Ship	UM	Promised Shipped
1	CR3242PR-4-02 * ALSO CERTIFY TO: * ASNA0077A402X * M7885/7-4-02 * NAS9305B-4-02 * NAS9305BNS-4-02 * S2457-4-2 * CR3242-4-02 		1600		EA	10/27/08 
			EZ LINE 87107710	35000.0		( )

TEST REPORTS ENCLOSED  
 DO NOT DESTROY

**HONEYWELL SOURCE**

**ACCEPTED:**

Stamp:



Date: 11-01-08

Packing List

PAS





**CHERRY®**  
**AEROSPACE**  
SPS Fastener Division, a PCC Company

Cherry Aerospace  
1224 East Warner Avenue  
Post Office Box 2157  
Santa Ana, CA 92707-0157  
USA



## PACKING LIST

Order No: SO322236  
Order Date: 05/06/08  
Print Date: 10/31/08

Page: 1



Sold-To: 10017870

Ship-To: 10041884

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HONEYWELL INTERNATIONAL INC.  
ATTN: ACCTS PAYABLE  
PO BOX 981157  
EL PASO, TX 79998  
USA

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HONEYWELL INC. HPG  
ALLIANCE GATEWAY 54  
700 HENRIETTA CREEK RD  
ROANOKE, TX 76262  
USA

Salesperson (s):106

Purchase Order: 903710



Credit Terms: net 30  
Net 30

Ship Via: YELLOW

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Remarks:

FASTENERS ECCN: 9A991d, SCHEDULE B# 8803300010

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1	CR3242PR-4-02 * ALSO CERTIFY TO: * ASNA0077A402X * M7885/7-4-02 * NAS9305B-4-02 * NAS9305BNS-4-02 * S2457-4-2 * CR3242-4-02 		1600		EA	10/27/08 
			EZ LINE 87107710	35000.0		( )

**TEST REPORTS ENCLOSED  
DO NOT DESTROY**

**HONEYWELL SOURCE  
ACCEPTED:**

Stamp:  Date: 11-01-08

### CERTIFICATION

### ATTENTION: PURCHASING DEPARTMENT

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications. Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

### Quality Assurance Representative

Signed



DAWN MILLER

MTR 1/3



**CHERRY AEROSPACE**

SPS Fastener Division, a PCC Company

Accredited  
**Nadcap**Chemical Processing  
Heat Treating  
ISO/IEC 17025  
Material Testing Lab1224 East Warner Avenue  
Santa Ana, CA 92707-0157**Final Inspection & Test Report**  
**CherryMax® Rivet****An ISO9001 and AS9100 registered company. OASIS #6111041606**

Part Numbers	Rev	Proc. Spec.	Rev
CR3242PR-4-02	AA	PS-CMR-3000	R
CR3242-4-02	AA	PS-CMR-3000	R
** See 2nd Page for the Customer Parts			

**Lot I.D. No.: 87107710****Lot Size: 35,000****MFG. Date: October 31, 2008****ASSEMBLY DATA**

TYPE	ID #	CERT #	MATERIAL	FINISH	LUBE
Rivet	87107710	A59915	QQ-A-430/5056	MIL-C-5541 CLEAR CL1A	None
Stem	87126777	A59918	AMS6322 / 8740ST	QQ-P-416/T2CL2/CAD PL	None
Collar	00000000	A59965	A-286 / AMS5731	Passivate per AMS2700	None

W.O. #: 5341614

Final Lube: None

**MECHANICAL STRENGTH TEST**

MIN REQ'D SAMPLE SIZE SPECS RESULTS	INSTALLED SHEAR		TENSION		SPINDLE RETENTION			DISASSEMBLY
	480		345		125			10
	8	5	8	5	5	8	5	5
	C-N-M	B	C-N-M	B	C-N-M	M	B	C-N-M-B
	928	1010	426	433	234	247	215	64
	914	949	432	426	266	264	264	34
	897	962	462	425	265	238	260	51
	924	978	423	426	249	244	216	58
	947	996	432	422	284	219	310	64
C=CR N=NAS	900		426			241		
M=MIL B=BAC	899		418			220		
LOAD VALUES IN POUND	912		423			230		

**METALLURGICAL AND OTHER RELATED TESTS/REQUIREMENTS**

PCS.	ITEM	STATUS	PCS.	ITEM	STATUS
<u>125</u>	<b>EXAMINATION</b>	<b>PASS</b>	<u>20</u>	<b>INSTALLATION (Min and Max Grips)</b>	<b>PASS</b>
	Locking feature (missing collar/spindle)			Spindle Protrusion/Recession	
	Roundness/Concentricity			Collar Protrusion	
	Dimensional, ID Marks, Tool Marks/Nick			Blind Head Dia./Formation	
	Visual (grip/material code, ID)			Tightness in plate	
	Laps, seams, folds				

**Comments:**

Blind Fastener

Tr. Rev: -  
Rev. Date: 10/31/2008Q Code  
V00Inspector  
V Iriarte

Cherry Aerospace certifies that the product tested above conforms to all referenced specifications listed and that the original data are available for review upon sufficient notice. Cherry Aerospace further certifies that the articles listed above have been manufactured and inspected in accordance with FAA TSO-C148. The conditions and tests required for TSO approval of this article are minimum performance standards. Aircraft fasteners approved under this TSO are not necessarily interchangeable with other aircraft fasteners approved under this TSO. Substitution of parts may only be done if acceptable to or approved by the FAA Administrator.

This test report shall not be reproduced except in full, without the written approval of the laboratory.  
The recording of false, fictitious, or fraudulent statement or entries on the certificate may be punished as a felony under Federal law.

Form No. 1141-10-75 Rev. D 08/16/07 CR07-0919



Page 1 of 2

MTR 2/3



**CHERRY<sup>®</sup> AEROSPACE**  
SPS Fastener Division, a PCC Company

1224 East Warner Avenue  
Santa Ana, CA 92707-0157



Accredited  
**Nadcap<sup>™</sup>**

Chemical Processing  
Heat Treating  
ISO/IEC 17025  
Material Testing Lab

## Final Inspection & Test Report CherryMax<sup>®</sup> Rivet

An ISO9001 and AS9100 registered company. OASIS #6111041606

Lot I.D. No.: **87107710**

Rev: -

### Customer Parts List

<u>Customer Part Number</u>	<u>Rev</u>	<u>Proc. Spec.</u>	<u>Rev</u>
NAS9305BNS-4-02	4	NAS1686	3
ASNA0077A402X	N	MIL-R-7885	D2
ASNA0077A402X	N	NAS1686	3
ASNA0077A402X	N	PS-CMR-3000	R
BACR15FP4B2R	W	NAS1740	8
M7885/7-4-02	C1	MIL-R-7885	D2
NAS9305B-4-02	4	NAS1686	3
S2457-4-2	E	MIL-R-7885	D2
S2457-4-2	E	NAS1686	3
S2457-4-2	E	PS-CMR-3000	R

Parts delivered in accordance with the standard amendments as agreed by Cherry/EADS.

MTR 3/3



**CERTIFIED INSPECTION REPORT AND TEST RESULTS**

**NICHOLS WIRE, INCORPORATED**

1547 Helton Drive - Florence, AL 35630

**SHIP TO:**

CHERRY AEROSPACE LLC

VMI / CONSIGNMENT AGREEMENT

1224 EAST WARNER AVE

SANTA ANA, CA 92707-0157

**SOLD TO:**

CHERRY AEROSPACE LLC

VMI / CONSIGNMENT AGREEMENT

1224 EAST WARNER AVE

SANTA ANA, CA 92707-0157

Customer PO Number VPO90156-2		NW WORK ORDER NO. 14579		<i>Shane Prager</i>	
DESCRIPTION .137 5056 H32 STEM				AUTHORIZED SIGNATURE QUALITY CONTROL MANAGER	
CUSTOMER PART NO.	ALLOY 5056	TEMPER H32		We hereby certify that the material covered by this report has been inspected in accordance with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown on this sheet.	
NW PART NO. H137A1		DATE SHIPPED 9/30/2008			
WEIGHT SHIPPED 1,052					

LOT NUMBER	# OF TESTS	ULTIMATE		YIELD		% ELONGATION	
		STRENGTH K.S.I.		STRENGTH K.S.I.			
		Min	Max	Min	Max		
K-842870 ✓	2	48	48.2				

**COMMENTS:**

M005-1370 REV P ✓

QQA 430 ✓

MILL SOURCE KAISER

MADE IN USA



OCT 11 2008



CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		OTHERS	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
	5056		0.30		0.40		0.10	0.05	0.20	4.50	5.60	0.05	0.20	0.05	0.15
		NICKEL		ZINC		TITANIUM		LEAD		BISMUTH					
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
					0.10										
ALUMINUM REMAINDER															



*Phc*



**KAISER ALUMINUM**  
& CHEMICAL CORPORATION

**CERTIFIED TEST REPORT**  
600 KAISER DRIVE HEATH, OH 43056

**SHIP TO**

NICHOLS WIRE INC.  
1547 HELTON AVE

FLORENCE

AL 35630

NICHOLS 8621 01 4000 D I

**SOLD TO**

NICHOLS WIRE INC.  
1547 HELTON AVE

FLORENCE

AL 35630

MADE IN USA

CUSTOMER PURCHASE ORDER NO. & ITEM 12462				KAISER ORDER NO. 214498930	
ALLOY K540	QUAN. 1	TEMPER F	GUAGE .37500	WIDTH 00.0000	LENGTH 000.000
ITEM ORDERED ALY-JUMBO					
CUSTOMER SPECIFICATION					
PART NUMBER 6Z37KH		B/L NUMBER 8621		DATE SHIPPED 09/02/08	
WEIGHT SHIPPED 39,938		NO. OF PIECES 192		GOVT. CONTRACT NO.	

**CERTIFICATION**

KAISER ALUMINUM & CHEMICAL CORPORATION (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER HAS BEEN INSPECTED AND TESTED AND FOUND IN CONFORMANCE WITH THE APPLICABLE SPECIFICATIONS FORMING A PART OF THE DESCRIPTION SET FORTH IN KAISER'S SALES ORDER ACKNOWLEDGEMENT FORM. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS & CONDITIONS OF SALE.

John Despins  
Technical Manager

LOT NUMBER	NO. OF TESTS		NDNE							
842870	0	MIN	N/A							
135948		MAX	N/A							
83-11F			Cu	Fe	Si	Mn	Mg	Zn	Cr	
			.00	.06	.03	.06	4.7	.01	.06	

PRODUCT PRODUCED FROM K540 MEETS THE REQUIREMENTS OF ALUMINUM ALLOY 5056



A59915



OCT 11 2008

**CHEMICAL COMPOSITION (WT.%)**

	Cu	Fe	Si	Mn	Mg	Zn	Cr	Others Each	Others Total	
MIN				.05	4.5		.05			
MAX	.10	.40	.30	.20	4.9	.10	.20	.05	.15	

ALUMINUM REMAINDER

PHC





**WireTech, Inc.**

6440 E. Canning Street  
Los Angeles, CA 90040  
Phone (323) 722-4933  
Fax (323) 721-2738

SOLD TO

**CHERRY AEROSPACE LLC**  
1224 E. WARNER AVENUE  
SANTA ANA, CA 92705-5414  
USA

WORK ORDER  
**064988**

# CERTIFICATION

HEAT NO. 554690  
SALES ORDER / RLS 827804 / 1  
ISO 9001-2000 REGISTERED



MECHANICAL TESTING  
CERT # 811.01

CUSTOMER P.O. <b>VPO92778</b>	CUSTOMER PART <b>m272.1040</b>	QUANTITY <b>3,174 Lbs</b>	CARRIERS <b>2</b>	LADING NO <b>00074478</b>	SHIPMENT DATE <b>10/10/2008</b>			
SPECIFICATION <b>C208740-101040A</b> <b>A-8740, AQ, SKFG, CHQ WIRE, SEAM &amp; DECARB FREE, SAIP Zinc Phosphate, Lime &amp; Stearate Coating,</b> <b>Size:0.103/0.105 Specifications: AMS2301H, AMS6322N, MIL-S-6049A, AMEND1, ASTM-A-547, AMS-S-6049-A, M</b> <b>272.1040 REV. P.</b>								
CERTIFICATION REQUIREMENTS								
Chemical Properties								
C	Si	Mn	P	S	Cu	Ni	Cr	Mo
.41	.25	.93	.021	.011	.25	.43	.44	.22
Physical Properties								
Grain Size Jominy 1	Jominy 2	Jominy 3	Inclusions Macro	Cleanliness	Mill Source			
6 J5=54	J8=49	J10=44	S2-R1-C2	GOOD	F&S=0	Charter		
Country of Origin								
USA - DFAR Compliant								
Mechanical Properties								
TEST	UNITS					Results		
Tensile Strength	KSI					134.1		
Yield Strength	KSI					114.0		
% Elongation	%					7		
% Reduction of Area	%					62.8		
Rockwell Hardness C Scale	HRC					29		
Decarb (Total)	In					0.00		
						 <b>OCT 13 2008</b>		

Merchandise covered by this invoice is warranted to be free from defects in workmanship or material but not for any specific length of time, type or measure of service. No claim for allowance will be recognized unless presented in writing within 10 days time after receipt of material. Our maximum liability for any claim predicated upon defective merchandise is limited to replacement of it, or to repayment of it, or to repayment of the purchase price thereof, as we elect. Material cut to specific length or size cannot be returned for credit and request for cancellation of such orders will not be considered if manufacture has been commenced. Buyer, by acceptance of the merchandise covered by this invoice, agrees to the foregoing terms and conditions and those set forth on the reverse hereof. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal statutes including Federal law, Title 18, Chapter 47.

REPRODUCTION OF THIS CERTIFICATION IS NOT ALLOWED UNLESS IN FULL.

Wire Tech, Inc. metallurgical laboratory is accredited in the following test: chemical analysis per ASTM E 415, mechanical testing per ASTM A 370, Rockwell hardness per ASTM E 18, metallographic mount preparation per ASTM E 3, decarburization depth per ASTM E 1077, IFI 140, inclusion rating per ASTM E 45, decarburization performed as per IFI 140. The reported Chemical and Physical Properties are Mill Source results. Transcribed from mill certificates. HRB(W) are hardness results performed with a 1/16" carbide ball. Unless otherwise specified, HRB and HRC results are conversions from ASTM A370 tables 1 and 2. \*Test result not covered by our current A2LA accreditation. Tests which have been undertaken by a subcontractor laboratory that is not accredited are not endorsed by A2LA or covered by Wire Tech, Inc. A2LA accreditation.

TEST RESULTS RELATE ONLY TO THE ITEMS TESTED.  
"LATEST REVISIONS OF ASTM"

Material is free of mercury, radium, or alpha contamination.



PHC

A59918



# CHARTER STEEL

A Division of  
Charter Manufacturing Company, Inc.

EMAIL

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400

## CHARTER STEEL TEST REPORT

Reverse Has Text And Codes

1-800-437-8789  
FAX (262) 268-2570

Wiretech Incorporated  
6440 East Canning Street  
Los Angeles, CA 90040-  
Attn: Janice Duran

Cast No	6244
Cast Part #	8740C1A060-C-R
Charter Sales Order	270825
Heat #	554690
Shipment #	556864
Grade #	8740 R SK FG AQ
Process	SA
Finish Size	1/4

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot # 554690

Lab Code: 7388

OUTS. MELT SOURCE HEAT NUM. = N/R

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.41	0.93	0.021	0.011	0.250	0.43	0.44	0.22	0.25	0.009	0.001
	AL	N	B	TI	NB						
	0.025	0.0070	0.0001	0.001	0.001						

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	58	57	57	56	54	53	51	49	46	44	42	40
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	40	39	38	37	36	35	34	34	33	33	33	32

JOMINY SAMPLE TYPE ENGLISH = B JOMINY LAB = 0358-01

CHEM. DEVIATION EXT.-GREEN = N/R

MACRO ETCH SURFACE = 1 MACRO ETCH RANDOM = 1 MACRO ETCH CENTER = 1

AMS 2301 FRQ AVE = 0.00 AMS 2301 FRQ IND = 0.00

AMS 2301 SEV AVE = 0.00 AMS 2301 SEV IND = 0.00

### Test Results of Rolling Lot # 402073

MAX ALLOWABLE DEFECT = 0.0000  
OC DEVIATION EXT.-GREEN = N/R

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	2	86.1	86.5	86.3	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	2	64	67	66	RA LAB = 0358-02
ROCKWELL B (HRBW)	2	83	85	84	RB LAB = 0358-02
ROCKWELL C (HRC)	0	0	0	0	RC LAB = N/R

NUM DECARB = 2 FREE FERRITE DECARB = 0.000 FREE FERR & PARTIAL DECARB = 0.003

CP SPHERO % LAB = 0358-02 NUM SPHERO = 2 SPHERODIZATION (%) = 80.0

QC DEVIATION EXT.-PROCESSED = N/R

Specifications:

Manufactured per Charter Steel Quality Manual Rev 8, 12-05-07

Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:

Customer Document = COP 3010

Revision = M Dated = 12-MAR-2003

Additional Comments:

MEETS REQUIREMENTS OF SPECIFICATIONS

AMS6322N/AMS2301J/MIL-S-6049A



OCT 13 2008

Charter Steel  
Saukville, WI, USA



Janice Barnard  
Manager of Quality Assurance  
08/25/2008

Fax number: (323) 721-2738

Rem: Load1, Mail0, Fax1

Page 1 of 1

PHC 1/2

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled, and processed in the United States.
2. Mercury was not used during the manufacture of this product, nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	CSMD	Charter Steel Melting Division	1653 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSR/D/CDPD	Charter Steel Rolling/Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	P4	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSC	Charter Steel Cleveland	4300 E. 49th St., Cuyahoga Heights, OH 44125-1004
358.05	128003	CSDT	Charter Steel Detroit	23860 Sherwood Ave. Center Line, MI 48015
.	.	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD, CSC	ASTM E415; ASTM E1019
X-ray Fluorescence Stainless and Alloy Steel	CSC	ASTM E572
Macroetch	CSMD, CSC	ASTM E381
Hardenability (Jominy)	CSMD, CSC	ASTM A255; SAE J406; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/D/CSPD, P4, CSC, CSDT	ASTM E8; ASTM A370
Rockwell Hardness	CSMD, CSR/D/CSPD, P4, CSC, CSDT	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/D/CSPD, P4	ASTM A892
Inclusion Content (Methods A, E)	CSR/D/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/09.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgement (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



OCT 13 2008



PHC<sup>2/2</sup>



# Certificate of Analysis

Radcliff Wire Inc. 97 Ronzo Rd., P.O. Box 603, Bristol, CT 06010

Date Shipped: 10/8/2008

PO #: VP091194

Qty. Shipped: 112 LBS-10 BLACK  
MIG SPOOLS

Radcliff No.: 112794

Heat No.: QG890 ✓

Customer: CHERRY AEROSPACE  
SANTA ANA OPERATIONS  
1224 EAST WARNER AVE  
SANTA ANA, CA 92705-5414

Country of Origin: FRANCE

Original Mill Source: FRANCE

Size: .006 X .011 X .056 \*\*\*

Material: A286 Stainless Steel

Description: SPECIAL SHAPE

Specification: AMS 5731 REV L CHEM OINLY

## Notes:

DFAR COMPLIANT  
PART# M189.44 REV V ✓  
NET WGT 112 LBS

## Chemical Properties

Al: 0.16% ✓	B: 0.007% ✓	Bi: <0.00002%	C: 0.04% ✓	Co: 0.21% ✓
Cr: 14.71% ✓	Cu: 0.38% ✓	Fe: BAL%	Mn: 1.75% ✓	Mo: 1.25% ✓
Ni: 24.53% ✓	P: 0.015% ✓	Pb: <0.0001%	S: 0.001% ✓	Si: 0.11% ✓
Ti: 2.17% ✓	V: 0.32% ✓			

Tensile: 96 KSI

Rockwell:

OCT 27 2008

Certs/Material



A59965

\_\_\_\_\_  
Lisa Piatek  
Certification Clerk

The material as shipped is free from mercury contamination



PHC

PERTH, ON  
ERIN, ON  
DUMAS, AR  
LANCASTER, SC

613-267-3752 FAX 613-267-5617  
519-833-9632 FAX 519-833-2213  
870-382-2980 FAX 870-382-6988  
803-283-3353 FAX 803-283-6303



UNION, IL  
HOUSTON, TX  
PERRIS, CA

815-923-2131 FAX 815-923-2126  
713-466-1000 FAX 713-466-7425  
951-657-2105 FAX 951-943-6061

THE LEADING MANUFACTURER OF STAINLESS STEEL, NICKEL AND COPPER ALLOY WIRE PRODUCTS  
EXECUTIVE OFFICES: PERTH, ON CANADA - EMAIL [sales@centralwire.com](mailto:sales@centralwire.com)

UNION WIRE PLANT  
OLSON & JEFFERSON STREET UNION, IL 60180-0423  
TEL: 815-923-2131 FAX: 815-923-2126

## CERTIFICATE OF CONFORMANCE

SOLD  
TO

RADCLIFF WIRE INC.  
P. O. BOX 603  
BRISTOL

CT 06011-0603

SHIP  
TO

RADCLIFF WIRE INC  
97 RONZO ROAD  
BRISTOL

CT 06110-0603

USA

USA

CUSTOMER'S PO NO.	TYPE OF CERT	CUSTOMER	ORDER NO.	WORK ORDER	DATE SHIPPED
39808	Customer	124610	1116175 2	4081679	9/04/08

### SPECIFICATIONS:

### ITEM DESCRIPTION

DESCRIPTION	SPEC. CLASS	HEAT
Forming A286SF SKIN PASSED Bright .0420 200LB. Plas Clean	Melt mill ArcelorMittal Country of origin FRANCE	QG890
	QTY SHIP 589	044

### CHEMICAL ANALYSIS

C .04	MN 1.75	SI .11	P .015	S < .001	CR 14.71	NI 24.53
MO 1.25	CU .38	CO .21	AL .16	TI 2.17	FE Balance	B .007
V .32	BI < .00002	PB < .0001				

### MECHANICAL PROPERTIES

#### AS SHIPPED PROPERTIES:

TENSILE 103.000 KSI MIN	TENSILE 114.000 KSI MAX					
-------------------------------	-------------------------------	--	--	--	--	--

#### AFTER HEAT TREAT PROPERTIES:

--	--	--	--	--	--	--

OCT 27 2008

"PASSIVATED IN PROCESS"

The material as shipped is free from mercury contamination. I certify the chemical analysis and physical and mechanical test results reported above are correct as contained in the records of the company.

Very truly yours,

*David M. May*  
AUTHORIZED SIGNATURE





P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
16	10	EA	MS20819-12J		P00033260-37076	DESIGNED METAL DBA P 14798			

  
\_\_\_\_\_  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15

# PERMASWAGE

**PERMASWAGE - Nelson Aerospace**  
A Designed Metal Connections, Inc. Company  
14800 S. Figueroa St  
Gardena, CA 90248  
Ph: 310-323-6200  
Fax: 310-217-3192

**Pack Slip: 58701**

**\*58701\***

**Sales Order: 29800**

**\*29800-2-1\***

Page: 1 of 1

**Customer  
Packing Slip**

**Ship To:**

**B/E AEROSPACE CONSUMABLES MANAGEM**  
9835 NW 14TH ST  
MIAMI FL 33172  
USA

**Verify AES requirements prior to shipment.**

**Sold To:**

**B/E AEROSPACE CONSUMABLES MANAG**  
10000 NW 15TH TERRACE  
MIAMI FL 33172-2756  
USA

**Verify AES requirements prior to shipment.**

**Fax: 305-507-7192**

**Ship Date: 9/3/2014**

**Ship Via: FEDEX GROUND**

**F.O.B.: EX WORKS**

**Cust P.O.: 0RLR87**

**Salesperson: JIM THOMPSON**

PO Line	Part Number	Ship To City	Part Number	Rev	Lot Number
------------	-------------	--------------	-------------	-----	------------

**FEDEX GRD # 0331-0149-0**

**RELEASE # BR500RLR87**  
5,000

**5,000**

**MS20819-12J**  
**SLEEVE**

**G F00033260-37076**

**Sale Order / Line / Release: 29800 / 2 / 1**

**Customer PO Number: 0RLR87**

**Certificates Required:**

**Standard Certification: Yes**  
**Full Certifications: No**

**First Article Inspection: No**  
**Chemical/Physical: No**

**Material Certificate: No**  
**FAIR per AS9102: No**

**Product is compliant to DFAR 252.225-7009**

**5 BOXES - 10X10X10 - 30 LBS EA**

**AN, MS, AS, NAS and other industry standard parts controlled by ECCN 9A991 and HTS 8803.30.00.00**  
**Products listed have not been exposed to mercury or mercury compounds during the manufacturing process.**

**!! MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY PERMASWAGE-NELSON AEROSPACE SALES @ 818-686-0900 !!**

**WE HERBY CERTIFY THAT ALL PROVISIONS OF THE FAIR LABOR STANDARDS ACT ON 8/25/83 AS AMENDED HAVE BEEN FULLY COMPLIED WITH IN THE MANUFACTURE, PRODUCTION OR PURCHASE OF GOODS LISTED HEREON. ALL ITEMS ARE SUBJECT TO A 100% RESTOCKING CHARGE. ALL PAST DUE ACCOUNTS SHALL BEAR INTEREST AT THE RATE OF 112% PER MONTH (18% PER ANNUM).**

**Certification of Conformance**

**NELSON AEROSPACE WARRANTS THAT THE ITEMS OF THIS SHIPPER WILL BE FREE FROM DEFECTS OF MATERIAL AND WORKMANSHIP AND, AS SET FORTH ON THE MATERIAL CERTIFICATION FORM, ACCOMPANYING THE ITEMS OF THIS INVOICE, ARE IN CONFORMITY WITH CONTRACT REQUIREMENTS AND SPECIFICATIONS, GOVERNMENT OR OTHERWISE. NELSON AEROSPACE DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ALL WARRANTIES OF MERCHANTABILITY AND OF THE FITNESS FOR A PARTICULAR PURPOSE. THE LIABILITY OF NELSON AEROSPACE IS EXPRESSLY LIMITED TO REPLACEMENT OF ANY ITEM WHICH IS REJECTED BECAUSE OF A DEFECT IN MATERIAL OR WORKMANSHIP. SUCH REPLACEMENT SHALL CONSTITUTE SATISFACTION OF ALL LIABILITY NELSON AEROSPACE MAY HAVE IN CONNECTION WITH SUCH ITEM, WHETHER LIABILITY IS BASED UPON CONTRACT RIGHTS, NEGLIGENCE OR OTHERWISE, AND IN NO EVENT SHALL NELSON AEROSPACE BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES. FURTHER, NELSON AEROSPACE MUST BE NOTIFIED OF A REJECTION OF AN ITEM WITHIN 30 DAYS AFTER RECEIPT BY THE CUSTOMER.**

**Country of Origin: MADE IN THE USA**

**BY RECEIVING DELIVERY OF THE GOODS COVERED BY THIS PACKING SLIP, BUYER EXPRESSLY ASSENTS TO THE TERMS AND CONDITIONS SET FORTH**

*Ken Chant*

**Manager of Quality Assurance or Designee**





P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXaerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
5	500	EA	CR3213-4-02		87999211	CHERRY AEROSPACE SAN	11815		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15



**CHERRY®**  
**AEROSPACE**

SPS Fastener Division, a PCC Company

Cherry Aerospace  
1224 East Warner Avenue  
Post Office Box 2157  
Santa Ana, CA 92707-0157  
USA



## PACKING LIST

Order No: SO383638  
Order Date: 05/12/14  
Print Date: 10/09/14

Page: 1



Sold-To: 10015341

S O L D T O	B/E AEROSPACE
	PO BOX 025263
	MIAMI, FL 33102-5263
	USA

Ship-To: 10043053

S H I P T O	B/E AEROSPACE INC,
	CONSUMABLES MANAGEMENT
	9835 NW 14TH ST
	MIAMI, FL 33172
	USA

Salesperson (s):110

Credit Terms: NET 30  
Net 30

Purchase Order: 0XZL19

Ship Via: FED EX NATIONAL CL  
FOB: Origin - Collect

### Remarks:

IF UNDER 150# SHIP FEDEX GROUND COLLECT ACCOUNT# 0331-0149-0  
IF OVER 150# SHIP FED EX NATIONAL ACCOUNT# 018757 - DO NOT INSURE  
DO NOT PREPAY AND ADD TO ANY OF THE ABOVE METHODS  
DO NOT SHIP EARLIER THAN TWO (2) WEEKS PRIOR TO DUE DATE, UNLESS SPECIFIED.

\*\*\*\*\*  
BRITISH AEROSPACE APPROVAL# BAe/AG/30158/MAA to BAe/AG/QC/SC1 PART 3  
AIRBUS APPROVAL# 30114  
\*\*\*\*\*

GOODS OF UNITED STATES ORIGIN

**TEST REPORTS ENCLOSED**

ECCN: EAR99

**DO NOT DESTROY**

\*\*\*\*\*  
\*IF APPLICABLE, PART MEETS DFARS CLAUSE 252.225-7009 ALT I  
\*PREFERENCE FOR DOMESTIC SPECIALTY METALS  
\*\*\*\*\*

RELEASE# LST1

\*\*\*\*\*  
Unless otherwise specified on this order, Cherry will manufacture and  
certify parts to the part number's latest revision. Latest revisions are  
shown at <https://bizpartner.cherryaerospace.com/partrevisions.htm> under  
"Part Number Revision List".  
\*\*\*\*\*

INCORRECT AND UNAVAILABLE PART NUMBERS WILL BE LINED OUT ON PO  
CHERRY AEROSPACE DOES NOT ACCEPT CLAUSE V IN REGARDS TO ISO17025- CHERRY  
IS COMPLIANT TO NADCAP REQUIREMENTS ONLY

Ln	Item Number	Site	Qty Open Qty to Ship	UM	Promised Shipped	
		T Location/Lot/Serial				
2	CR3213-4-02	1600		EA	12/11/14	

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited

### CERTIFICATION

### ATTENTION: PURCHASING DEPARTMENT

Quality Assurance Representative

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications. Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

Signed

SIM NGUYEN



**CHERRY®**  
**AEROSPACE**

SPS Fastener Division, a PCC Company

Cherry Aerospace  
1224 East Warner Avenue  
Post Office Box 2157  
Santa Ana, CA 92707-0157  
USA



## PACKING LIST

Order No: SO383638  
Order Date: 05/12/14  
Print Date: 10/09/14

Page: 2



Sold-To: 10015341


Ship-To: 10043053

S  
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B/E AEROSPACE  
PO BOX 025263  
MIAMI, FL 33102-5263  
USA

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B/E AEROSPACE INC,  
CONSUMABLES MANAGEMENT  
9835 NW 14TH ST  
MIAMI, FL 33172  
USA

Ln	Item Number	Site T Location Lot/Serial	Qty Open Qty to Ship	UM	Promised Shipped
2	CR3213-4-02 Customer Item: ASNA0078A402 5320-01-151-1061 B0207005-4-02 CAN43078B4-2 M7885/2-4-02 MBBN3012L3202 NAS9301B-4-02 NAS9301BNS-4-02 S2906-4-2 	EZL-A48 87999211	34620.0	( )	

**TEST REPORTS ENCLOSED**  
**DO NOT DESTROY**

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited

#### CERTIFICATION

#### ATTENTION: PURCHASING DEPARTMENT

#### Quality Assurance Representative

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications. Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

Signed

SIM NGUYEN



## Product Certification And Testing Report

Customer:  
CHERRY AEROSPACE LLC  
ATTN: ACCTS. PAYABLE  
1224 EAST WARNER AVENUE  
P.O. BOX 2157

SANTA ANA CA 92707-0157

Date >> 7/31/2014

Customer PO No.	BWC Lot No.	Date Shipped
PO168166	26509	7/31/2014
Cust Item ID: M005.1230		

BWC Item No.  
501230832041A01

Description:  
.123" DIA. + - .0005" #4F 5056 - H32  
#4 FINISH, ALUMINUM COLD HEADING WIRE X 22"  
BLOCKWOUND 100# COILS.

### Specifications:

CUST SPEC	M-5	REV. T
FED SPEC	QQ-A-430	REV. C

Chemical Limits											Test Results									
Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others Each	Others Total	Aluminum Remainder	Case No.	lbs	Diameter (in)	Tensile (psi)	Yield (psi)	Peak Load (lbs)	EL %	Grain Size	
5056	.30	.40	.10	.05	.20	4.5 - 5.6	.05	.20	.10	.05	.15									
851660	.05	.08	.00	.06	4.8	.07	.00	.01				42824-1	529	0.1228	46,850.0		554.8			
852565	.03	.07	.00	.06	4.7	.07	.01	.01				42824-2	96	0.1227	46,200.0		546.3			
Total Weight:													625							

AUG 11 2014



A75288



Beneke Wire Company  
851660

### Beneke Wire Company

WE CERTIFY THAT SAMPLES REPRESENTING THE MATERIAL COVERED IN THIS REPORT HAVE BEEN INSPECTED AND FOUND TO MEET THE COMPOSITION LIMITS AND MECHANICAL PROPERTIES SHOWN ABOVE. ANY WARRANTY IS LIMITED TO THAT SHOWN ON BENEKE WIRE COMPANY'S STANDARD TERMS AND CONDITIONS OF SALE.

Authorized  
Signature

Shannon King, Plant Metallurgist

5540 National Turnpike

Louisville, KY 40214

Phone: (502) 367-6434

**KAISER  
ALUMINUM**  
FABRICATED PRODUCTS

*Best in Class*

**CERTIFIED TEST REPORT**

<http://Online.KaiserAluminum.com>

Kaiser Aluminum Fabricated Products, LLC  
600 Kaiser Drive  
Heath, OH 43056-1088  
740-522-1151

**Miscellaneous Notes**

Made in USA

Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. Actual (Act) chemical composition is from representative samples taken during the ingot casting process. Independent chemical analysis will vary from these values because of natural variation in the process and testing error. This test report shall not be reproduced, except in full, without the written approval of Kaiser Aluminum. The recording of false, fictitious, or fraudulent statements or entries on the certificate may be punished as a felony under federal law. Chemical analysis performed in accordance with ASTM E 1251-11. The Newark facility is AS9100C:2009 approved. The Newark Laboratory is NADCAP approved for chemical testing (OES).

The products you inquired and ordered are not governed by any applicable industry standard or custom specifications. They are produced, tested and released as such. By placing an order, you acknowledge and accept the full responsibility and liability for their fitness for the intended end use or end uses.

**CERTIFICATION**

Kaiser Aluminum Fabricated Products, LLP ("Kaiser") hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales order acknowledgement form. Any warranty is limited to that shown on Kaiser's standard general terms and conditions.

Warren Marcucci, Technical Manager

*Warren Marcucci*

AUG 11 2014



A75288

Plant Serial: 32469  
Kaiser Order Number: 172556284  
Line Item: 1



**WireTech, Inc.**

6440 E. Canning Street  
Los Angeles, CA 90040  
Phone (323) 722-4933  
Fax (323) 721-2738

SOLD TO

**CHERRY AEROSPACE LLC**  
1224 E. WARNER AVENUE  
SANTA ANA, CA 92705-5414  
USA

WORK ORDER  
**107756**

**CERTIFICATION**

HEAT NO.  
**10315220**  
SALES ORDER / RLS  
**855468 / 1**  
ISO 9001-2000 REGISTERED



MECHANICAL TESTING  
CERT # 911.01

CERT# 911.01

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	CARRIERS	LADING NO	SHIPMENT DATE			
VP201301	M272.1040	2,552 Lbs	4	00110757	06/20/2014			
SPECIFICATION C208740-101040A A-8740, AQ, SKFG, CHQ WIRE, SEAM & DECARB FREE, SAIP Zinc Phosphate, Lime & Stearate Coating, Size:0.1035/0.1045 Specifications: AMS 2301K, AMS6322N, MIL-S-6049A, AMEND1, ASTM-A-547, AMS-S-6049-A, M 272.1040 REV. T								
CERTIFICATION REQUIREMENTS								
Chemical Properties								
C	Si	Mn	P	S	Cu	Ni	Cr	Mo
.41	.25	.85	.007	.005	.08	.43	.53	.22
Physical Properties								
Grain Size	Jominy 1	Jominy 2	Jominy 3	Inclusions	Macro	Cleanliness	Mill Source	
6 J5=55	J8=48	J10=45	S2-R1-C2	GOOD	F&S=0	Charter		
Country of Origin								
USA - DFAR Compliant								
Mechanical Properties								
TEST	UNITS	Results						
Tensile Strength	KSI	133.8						
Yield Strength	KSI	113.8						
% Elongation	%	5						
% Reduction of Area	%	56.9						
Rockwell Hardness C Scale	HRC	29						
Decarb (Total)	In	0.00						

A75029

WireTech, Inc.

10315220

JUN 23 2014

Merchandise covered by this invoice is warranted to be free from defects in workmanship or material but not for any specific length of time, type or measure of service. No claim for allowance will be recognized unless presented in writing within 10 days time after receipt of material. Our maximum liability for any claim predicated upon defective merchandise is limited to replacement of it, or to repayment of it, or to repayment of the purchase price thereof, as we elect. Material cut to specific length or size cannot be returned for credit and request for cancellation of such orders will not be repaid if manufacture has been commenced. Buyer, by acceptance of the merchandise covered by this invoice, agrees to the foregoing terms and conditions and those set forth on the reverse hereof. \*The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal statutes including Federal law, Title 18, Chapter 47.\*

REPRODUCTION OF THIS CERTIFICATION IS NOT ALLOWED UNLESS IN FULL.

Wire Tech, Inc. metallurgical laboratory is accredited in the following test: chemical analysis per ASTM E 415, mechanical testing per ASTM A 370, Rockwell hardness per ASTM E 18, metallographic mount preparation per ASTM E 3, decarburization depth per ASTM E 1077, IFI 140, inclusion rating per ASTM E 45, decarburization performed as per IFI 140. The reported Chemical and Physical Properties are Melt Source results. Transcribed from mill certificates. HRB(W) are hardness results performed with a 1/16" carbide ball. Unless otherwise specified, HRB and HRC results are conversions from ASTM A370 tables 1 and 2. \*Test result not covered by our current A2LA accreditation. Tests which have been undertaken by a subcontractor laboratory that is not accredited are not endorsed by A2LA or covered by Wire Tech, Inc. A2LA accreditation.

TEST RESULTS RELATE ONLY TO THE ITEMS TESTED.

DFAR Material per Clauses 252.225-7014 ALT. 1, 252.225-7009, & 225.003(9)

"LATEST REVISIONS OF ASTM"

Material is free of mercury, radium, or alpha contamination.

*Garry Goodson*

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled, and processed in the United States meeting DFARS compliance, LEEDS compliance, REACH compliance, ROHS-WEEE compliance, and Conflict Materials Restrictions.
2. Mercury was not used during the manufacture of this product, nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory	Address
0358-01	7388	CSSM Charter Steel Melting Division	1635 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSSR/ CSSP Charter Steel Rolling/ Processing Division	1635 Cold Springs Road, Saukville, WI 53080
0358-03	123633	CSFP Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSCM/ CSCR Charter Steel Cleveland	4300 E. 49th St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel System

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Specifications	CSSM	CSSR/ CSSP	CSFP	CSCM/ CSCR
Chemistry Analysis	ASTM E415; ASTM E1019	X			X
Macroetch	ASTM E381	X			X
Hardenability (Jominy)	ASTM A255; SAE J406; JIS G0561	X			X
Grain Size	ASTM E112	X	X	X	X
Tensile Test	ASTM E8; ASTM A370		X	X	X
Rockwell Hardness	ASTM E18; ASTM A370	X	X	X	X
Microstructure (spheroidization)	ASTM A892		X	X	
Inclusion Content (Methods A, E)	ASTM E45		X		X
Decarburization	ASTM E1077		X	X	X

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 1/31/15. All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgement (designated by our Sales Order number) to the customer's purchase order. Both order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



JUN 23 2014



A75029

## Certificate of Conformance

Sold To: CHERRY AEROSPACE  
SANTA ANA OPERATIONS  
1224 EAST WARNER AVE  
SANTA ANA, CA 92705-5414

Date Shipped: 04/15/2014  
PO #: VP125694  
Radcliff No.: 131313  
Heat No.: QN237/12  
Qty. Shipped: 105 LBS-8-BLACK MIG  
SPOOLS

### Item Description

.006 X .011 X .056 \*\*\* A286 Stainless Steel SPECIAL SHAPE AMS 5731 REV L, AMS  
5737 REV P CHEM  
ONLY

Melting Country: France

Producing Country: United States

Notes:  
PART# M189.44 REV W  
CONSIGNMENT ORDER

RADCLIFF WIRE, INC.  
QN237/12



A74740

### Chemical Analysis

Al: 0.176%	B: 0.006%	C: 0.072%	Co: 0.13%
Cr: 14.79%	Cu: 0.102%	Mn: 1.72%	Mo: 1.23%
Ni: 24.55%	P: 0.015%	S: 0.003%	Si: 0.086%
Ti: 2.19%	V: 0.309%		

### Mechanical Properties

Rockwell: 93 KSI

MAY 13 2014  
AUDIT

We certify that the chemical analysis, physical properties, and mechanical test results  
are correct as contained in our records, and that they conform to customer requirements.

Material as shipped, is free from mercury contamination.

Material is DFAR compliant

*Lisa Platek*

**Lisa Platek**

Certification Clerk



0300A286ANRI



## KOS LIMITED

131-1 Yuson-dong Yangsan-si, Kyungnam,  
Korea

TEL : (055) 389-1050 FAX : (055) 385-9189

E-mail : kosyrd@koswire.com

## Inspection Certificate

DATE OF ISSUE: 2013-10-21

DESCRIPTION	NICKEL ALLOY WIRE (TSB)		
MILL CERT. NO.	HA1-201310A-0101	GRADE	A286VAR
P.O NO.	1022369	DIAMETER	0.0300 INCH
INVOICE NO.	T131021/07 (T13A102-01)	FINISH	DU X-CO (30" SPOOL)
CONTRACTOR	INTERWIRE GROUP (HEAD OFFICE)	QUANTITY	468.5 LBS (1 SPOOL)
CUSTOMER	INTERWIRE GROUP (HEAD OFFICE)	APP. SPEC	BUYER'S SPEC

## CHEMICAL COMPOSITION

(wt%)

COMPONENT	C	Si	Mn	P	S	Ni	Cr	Mo	Cu	V	Al
CH. NO. QN237/12	0.0720	0.0860	1.7200	0.0150	0.0030	24.5500	14.7900	1.2300	0.1020	0.3090	0.1760

## INSPECTION RESULTS

ITEMS NO.	SIZE ( INCH )	T/S ( RSJ )	R/A ( % )				LOT NO.	REMARK
	+0.00050 -0.00050	110.0 90.0						
4	0.0301	109.3	64.0				1B1211-30728-0004	QN237/12

MAY 13 2014

RADCLIFF WIRE, INC.  
052311/2

A74740

## REMARKS

0300A286ANRI.

We hereby certify that the material described  
herein has been made in accordance with the  
specification of the order.

J. M. PEEB

MANAGER OF Q.C Dept.

operam

CERTIFICAT DE RECEPTION 3.1-EN 10204 n° C065401/2  
Inspection certificate - Abnahmeprüfzeugnis

Usine - Works - Werk  
Allôys D'uphy  
58160 THUPHY FRANCE  
Téléphone: 02 86 21 30 10  
Télécopie: 02 86 21 31 10

Client Customer Kunde	KOS LIMITED	du of	09/12/11
V/Contrats Your order Ihre Bestell. Nr.	EMAIL DATED DEC. 5TH		
Spécification Specification Vorschrift	AMS CHEMISTRY		

N° de référence  
Our reference  
Unter Auftrags-Nr.: 309154/01

Produit Product Erzeugnisform	SY 206 WIRE ROD DIAM/6.0000/MM SUH 660	Etat de livraison Condition of delivery Lieferzustand	SHAVED
		N° de fabrica Manufact. Nr Fabr.Nr.	4100263971
		Poids Weight Gewicht	1290 KG
		Nombre Qnt. No. Stückzahl	4 PI

COMPOSITION CHIMIQUE (X poids) CHEMICAL COMPOSITION (X weight) CHEMISCHE ZUSAMMENSETZUNG (X Gewicht)										Coutée n° Heat n° Schmelz n°	
C	Mn	Si	S	P	Ni	Cr	Mo	Cu	Co	CN237/12	
0.072	1.720	0.086	0.003	0.015	24.550	14.790	1.230	0.102	0.130		
V	Al	Ti	Pb	Bi	B	Fe					
0.009	0.176	2.190	0.0002	0.00002	0.006	bal.					

7221000000 STAINLESS STEEL WIRE ROD  
(HOT-ROLLED, IN IRREGULARLY WOUND COILS)  
SUH660 VAR A6.5MM 14,000.00KG SUH660 VAR A11.5MM 16,000.00KG  
SUH660 VAR A8.5MM 10,000.00KG COUNTRY OF ORIGIN: FRANCE  
CIF BUSAN PORT  
CARACTERISTIQUES MECANQUES ET AUTRES ESSAIS / TESTS RESULTS

ETAT DE LIVRAISON  
CONDITION OF DELIVERY

RESISTANCE..... TENSILE STRENGTH..... : 571 MPA  
ALLONGEMENT..... ELONGATION..... : 45 %  
STRICTION..... RED. OF AREA..... : 69 %  
GRAIN ASTM..... SIZE ASTM..... : 5.5 ASTM

HYPERTREMPE 980°1H EAU+VIEILLISSEMENT 720°16H AIR  
HEAT TREATMENT OF SPECIMEN 1850°F/1H WATER+325°F 16H AIR

LIMITE ELASTIQUE..... YIELD STRENGTH 0.2%..... : 752 MPA  
RESISTANCE..... TENSILE STRENGTH..... : 1092 MPA  
ALLONGEMENT..... ELONGATION 50%..... : 30.0 %

MAY 13 2014



QUALITY CONTROL

DUPUIS G.

Signature  
Signature  
Unterschrift

24/05/12  
Imphy plant

Voir page suivante

PAGE N° 1

ROD OF WIRE INC.  
CN237/12



A74740

uperam

CERTIFICAT DE RECEPTION 3.1-EN 10204 n° C066401/2  
Inspection certificate - Abnahmeprüfzeugnis

Client  
Customer  
Kunde : KOS LIMITED  
V/Commande  
Your order  
Ihre Bestellung, Nr : EMAIL DATED DEC. 5TH  
Spécification  
Specification  
Vorschrift : AMS CHEMISTRY  
Dt : 09/12/11  
Von

Reference  
Our reference  
Ihrer Auftrag Nr. : 309154/01

STRICTION..... RED. OF AREA..... : 51.0 %  
DURETE HB..... HARDNESS..... : 323 HB

FLUAGE  
STRESS RUPTURE TEST AT 1200°F (649°C)  
UNDER 10,000 PSI (689.5 MPa)  
DUREE DE VIE..... TIME..... : 79.2 H  
ALLONGEMENT..... ELONGATION..... : 20.0 %

ETAT HYPERTREMPE 900° + VIEILLISSEMENT 720°16H AIR  
HEAT TREATMENT OF TEST SPECIMEN 1650°F IN WATER 1325°F 16H AIR

LIMITE ELASTIQUE..... YIELD STRENGTH 0.2%..... : 781 MPa  
RESISTANCE..... TENSILE STRENGTH..... : 1085 MPa  
ALLONGEMENT..... ELONGATION 31R 40..... : 29.0 %  
STRICTION..... RED. OF AREA..... : 52.0 %  
DURETE HB..... HARDNESS..... : 316 HB

FLUAGE  
STRESS RUPTURE TEST AT 1200°F (649°C)  
UNDER 65,000 PSI (448.2 MPa)  
DUREE DE VIE..... TIME..... : 174.0 H  
ALLONGEMENT..... ELONGATION..... : 20.0 %

CHEMISTRY TO MEET AMS 5731, AMS 5732, 5734 AND 5737  
NO WELDING WITH FILLER METAL HAS BEEN PERFORMED  
MATERIAL IS FREE FROM MERCURY, RADIUM, OR ALPHA SOURCE  
CONTAMINATION

MAY 13 2014



A74740  
RACLIFF WIRE, INC.  
0023712

# APPENDIX

## SPECIFICATION

Customer' Spec. Code	BUYER'S SPEC
References	

## CHEMICAL COMPOSITION

Q237/12	C	SI	Mn	P	S	Ni	Cr	Mo	Cu	V	Al
	0.0720	0.0860	1.7200	0.0150	0.0030	24.5500	14.7900	1.2300	0.1020	0.3080	0.1760
	Co	Ti	B								
	0.1300	2.1800	0.0060								

## RAW MATERIAL INFORMATION

Supplier	APERAM ALLOYS IMPHY
Country of origin	FRANCE
Melt Method	AOD / VAR.
Surface	Seam Free
DFARS	Compliance with DFARS 252.225-7014 ALT.
Others	Free from Mercury, Radium or Alpha Source contamination.
Heat No.	Q237/12

RADCLIFF WIRE INC  
Q237/12



A74740

## MECHANICAL PROPERTIES AFTER HEAT TREATMENT

H.T. Condition : 1800°F 1hr WQ + 1325°F 16hr AC					Stress Rupture		
TENSILE, KSI	YIELD, KSI	E/L, %	R/A, %	HB	1200°F 70 KSI	Time, hr	E/L, %
158.5	109.2	30.0	51.0	323.0		20.0	79.2
H.T. Condition : 1650°F 1hr WQ + 1325°F 16hr AC					Stress Rupture		
TENSILE, KSI	YIELD, KSI	E/L, %	R/A, %	HB	1200°F 65 KSI	Time, hr	E/L, %
157.5	113.4	29.0	52.0	316.0		174.0	20.0
<div style="text-align: center;"> <p>MAY 13 2014</p> </div>							
Grain Size : ASTM No. 5.5		We hereby certify that the material described herein has been made in accordance with the specification of the order.				S. H. AHN	
						MANAGER OF Q. C. Dept	

END

# The Inter Wire Group

www.interwiregroup.com  
355 Main Street - Armonk, NY 10504  
Phone: (914) 273-6633 Fax: (914) 273-6848

## Material Certification

Invoice: 1294414  
Invoice Date: 11/6/2013  
Our Order: 1261658  
Customer PO: 46519++  
Sales Rep: BRUCE MASSEY

**BILL TO:**  
RADCLIFF WIRE  
RONZO ROAD  
P.O. BOX 603  
BRISTOL, CT 06011-0103

**SHIP TO:**  
RADCLIFF WIRE  
97 RONZO RD  
BRISTOL, CT 06010

Delivery No. 1036727

Ship Date: 11/06/13


Ship VIA: OUR TRUCK

ITEM DESCRIPTION			
Item No:	0300A286ANRL	Mill Name:	KOS
Customer Part No:		Country of Origin:	FRANCE
Description:	.030 ANN A286 RL	Melt Source:	IMPHY
		DFAR Compliant:	YES
		RoHS Compliant:	YES
Specification:	ASTM-A453	QTY SHIP	468
		HEAT NO.	QN237/12

Ticket Number	Qty
01102413026	468

Chemical Properties						
Element	C	MN	SI	P	S	CR
Value	0.0720	1.7200	0.0860	0.0150	0.0030	14.7900
Element	NI	MO	V	AI	TI	B
Value	24.5500	1.2300	0.3090	0.1760	2.1900	0.0060
Element	CU					
Value	0.1020					
Mechanical Properties						
Element	TENS STR MIN	TENS STR MAX				
Value	109,300	109,300				
Test Results						
Test	WRAP TEST	MICRO-STRUCTURE	SURFACE CONDITION	COILING TEST	MERCURY FREE	
Result	Pass	Pass	Pass	Pass	Pass	

A74740



RADCLIFF WARE, INC.  
002371/2

A74740  
RADCLIFF WIRE, INC.  
01102413026

The material has been inspected by the mill and conforms to the above referenced specifications.

MAY 13 2014



*Bruce D. Massey*

Bruce Massey - General Manager  
AUTHORIZED SIGNATURE



**CHARTER  
STEEL**

A Division of  
Charter Manufacturing Company, Inc.

EMAIL

165B Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8709  
Fax (262) 268-2570

## CHARTER STEEL TEST REPORT

Melted in USA Manufactured in USA

Wiretech Incorporated  
6440 East Canning Street  
Los Angeles, CA-90040  
Kind Attn : Cert To Contact

Cust P.O.	7224-1
Customer Part #	8740C1A060-C
Charter Sales Order	70052542
Heat #	10315220
Ship Lot #	4271511
Grade	8740 R SK FG AQ 1/4
Process	HRSA
Finish Size	1/4
Ship date	13-MAY-14

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and that it satisfies these requirements. The recording of false, fictitious and fraudulent statements or entries on this document may be punishable as a felony under federal statute.

### Test results of Heat Lot # 10315220

Lab Code: 7388

CHEM

%Wt

C	MN	P	S	SI	NI	CR	MO	CU	SN	V
.41	.85	.007	.005	.250	.43	.53	.22	.08	.006	.002
AL	N	B	TI	NB						
.025	.0070	.0001	.002	.001						

JOMINY(HRC)

J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J12
57	57	57	57	55	52	50	48	47	45	42
J14	J16	J18	J20	J24	J28	J32				
40	38	36	35	33	31	30				

JOMINY SAMPLE TYPE ENGLISH=C

MACRO ETCH SAMPLE TYPE=R

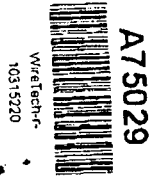
MACRO ETCH SURFACE=1

MACRO ETCH RANDOM=1

MACRO ETCH CENTER=1

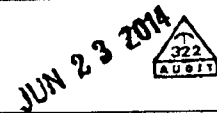
AMS 2301 FREQUENCY AVERAGE=.00  
AMS 2301 SEVERITY AVERAGE=.00

AMS 2301 FREQUENCY INDIVIDUAL=.00  
AMS 2301 SEVERITY INDIVIDUAL=.00



### Test results of Rolling Lot # 1126098

REDUCTION RATIO=616:1



### Test results of Processing Lot #4270842, 4271511

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	2.0	85.6	85.8	85.7	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	2	61	63	62	RA LAB = 0358-02

NUM DECARB=2  
NUM SPHERO=2

FREE FERRITE DECARB (Inch)=.000  
SPHERODIZATION (%)=80.0

FREE FERR & PARTIAL DECARB (Inch)=.003  
CP SPHERO % LAB=0358-02

Specifications:

Manufactured per Charter Steel Quality Manual Rev Date 9/12/12

Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:

Customer Document = AMS6322N/AMS2301K/COP3010M/BS2S147:1976 CHEM ONLY

Revision = Dated =

Additional Comments:

Charter Steel  
Saukville, WI, USA



Testing Laboratory

This MTR supersedes all previously dated MTRs for this order

Janice Barnard  
Manager of Quality Assurance  
Printed Date : 05/13/2014

Rem: Load1,Fax0,Mail0

# KAISER ALUMINUM FABRICATED PRODUCTS

*Best in Class*

## CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

Kaiser Aluminum Fabricated Products, LLC  
600 Kaiser Drive  
Heath, OH 43056-1088  
740-522-1151

CUSTOMER PO NUMBER:		CUSTOMER PART NUMBER:		PRODUCT DESCRIPTION:	
				ALY-JUMBO	
KAISER ORDER NUMBER:	LINE ITEM:	SHIP DATE:	ALLOY:	TEMPER:	
172556284	1	09/09/2013	K540		
WEIGHT SHIPPED:	QUANTITY:	B/L NUMBER:	DIAM/DAF/THKNS:	WIDTH:	LENGTH:
12946 lbs.	60 pcs.	7835		0.000 in.	0.0 in.
SHIP TO:			SOLD TO:		
BENEKE WIRE COMPANY 5540 NATIONAL TURN PIKE LOUISVILLE, KY 40214			BENEKE WIRE COMPANY 5540 NATIONAL TURN PIKE LOUISVILLE, KY 40214		

Test Code: 4000

### Actual Physical Properties

Lot No.

851660 0.0

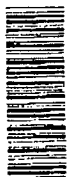
### Chemical Composition, WT. % (Aluminum Remainder)

Lot		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
Cast/Drop									
ChemID.									
851660									
56-2F2	Act.	0.05	0.08	0.00	0.06	4.8	0.07	0.00	0.01
183822									
Chemical	Min				0.05	4.5	0.05		
Limits	Max	0.30	0.40	0.10	0.20	4.9	0.20	0.10	0.05
	Others	Each	0.05	Max		Total	0.15	Max	

AUG 11 2014



Beneke Wire Company  
851660



A75288

Plant Serial: 32469

Kaiser Order Number: 172556284

Line Item: 1.



**CHERRY** AEROSPACE  
SPS Fastener Division, a PCC Company

1224 East Warner Avenue  
Santa Ana, CA 92707-0157



Chemical Processing  
Heat Treating  
ISO/IEC 17025  
Material Testing Lab

## Final Inspection & Test Report - CherryMax® Rivet

An ISO9001 and AS9100 registered company. OASIS #6111041606

Lot I.D. No.: 87999211

Rev: -

### Customer Parts List

<u>Customer Part Number</u>	<u>Rev</u>	<u>Proc. Spec.</u>	<u>Rev</u>
ASNA0078A402	P	NAS1686	4
5320-01-151-1061	-	PS-CMR-3000	R
B0207005-4-02	E	MIL-R-7885	D2
CAN43078B4-2	8	NAS1686	4
M7885/2-4-02	D	MIL-R-7885	D2
MBBN3012L3202	01/06	MBBN3015	12.2003
NAS9301B-4-02	5	NAS1686	4
NAS9301BNS-4-02	5	NAS1686	4
S2906-4-2	B	MIL-R-7885	D2

Parts delivered in accordance with the standard amendments as agreed by Cherry/EADS.





P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172

### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
14	50	EA	MS20615-4M20		260620 P01 P002	AHG ATELIERS HAUTE-G	P0095		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15



# ATELIERS DE LA HAUTE-GARONNE

Ets AURIOL & Cie - S.A. au capital de 201850 EUR - Z.I. de FLOURENS BP73103 26 route de Lasbordes - 31130 FLOURENS (FRANCE)  
Tél. (33) 5 61 83 60 35 - Fax (33) 5 61 83 95 05 - RCS TOULOUSE B 550 800 528 - SIRET 550 800 528 00014 - APE 2593Z

## CERTIFICATE of CONFORMITY and TEST REPORT N° A521547

of 16 MAY 2012

Page 1

LBZ

ACCORDING TO NF L 00-15C AND EN10204 TYPE 3.1

Your P.O. nb. : <b>OFPN44</b>	of : <b>14 FEB 2012</b>	Supplier number : <b>V1088</b>
N° ack. : <b>260620</b>	of : <b>14 FEB 2012</b>	
Shipment to : (or notify party) <b>B/E AEROSPACE INC</b> <b>9835 NW 14TH ST</b> <b>(ORIGIN= FRANCE)</b>		
<b>33172 MIAMI</b> <b>ETATS UNIS</b>		

ITEM	ORDERED	PART NUMBER	SHIPPED
1	100.000 Lb.	<b>MS20615-4M20 (3)</b> Monel400/NU30/2.4360 univ.head marked cham.optio roll sorting No coating NASM20615 ed.3 July 03	<b>35.000 Lb.</b> <b>6250 Pcs **</b>
Technical spec : QQ-N-281 class A rev.D			

Lot nb **260620 P001 F002** Qty.: **35.000 Lb.** AHG Wire lot nb.: **195677** Material heat nb.: **63061**  
NATO Cod : **F0095** Origin: **France**  
Manufacture heading date: **09 MAY 2012** Material Producer : **DN**

Cls./Shear strength	08-058MO	double(D)/simple(S):	D Rc/shear strength	Mini	Maxi	Value	Unit	Test#
				49.00	59.00	53.73	KSI	5
			D Rc/shear strength	49.00	59.00	53.58	KSI	
			D Rc/shear strength	49.00	59.00	53.89	KSI	
			D Rc/shear strength	49.00	59.00	54.07	KSI	
			D Rc/shear strength	49.00	59.00	53.81	KSI	
Ecrasement/Driveability	conforme: O/N	O defaults/defects		0.00	0.00			5

AL 0,00500	C 0,09800	CO 0,02000	CU 33,46000	FE 1,62000	MN 0,92000	NI + CO 63,79000	P 0,00000	PB 0,00000	S 0,00100	SI 0,06000
SN 0,00000	TI 0,00000	ZN 0,00000	ZN+SN+PB 0,00000							NI BALANCE

OUR AIRBUS SAS APPROVAL NUMBER IS : 30030 of 31 August 2007  
OUR BAE SYSTEMS APPROVAL LETTER REFERENCE IS : ACO/A/LT/JJH/3035

Item 1 to be continued

./..



# ATELIERS DE LA HAUTE-GARONNE

Ets AURIOL & Cie - S.A. au capital de 201850 EUR - Z.I. de FLOURENS BP73103 26 route de Lasbordes - 31130 FLOURENS (FRANCE)  
Tél. (33) 5 61 83 60 35 - Fax (33) 5 61 83 95 05 - RCS TOULOUSE B 550 800 528 - SIRET 550 800 528 00014 - APE 2593Z

## CERTIFICATE of CONFORMITY and TEST REPORT N° A521547

of 16 MAY 2012

ACCORDING TO NF L 00-15C AND EN10204 TYPE 3.1

Page 2

LBZ

Your P.O. nb. : **OFPN44**  
N° ack. : **260620**

of : **14 FEB 2012**  
of : **14 FEB 2012**

Supplier number : **V1088**

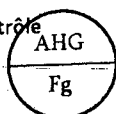
ITEM	ORDERED	PART NUMBER	SHIPPED
Item 1	Continuation	MS20615-4M20 (3)	

Parts manufactured by AHG and delivered under this CofC are DFARS compliant per DFAR 252.225-7009  
We hereby declare, subject to exceptions, reservations, or concessions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they satisfy in every respect all specified requirements and applicable standards and regulations.

\*\* Estimated quantity

SUPPLIER'S INSPECTION 16 MAY 2012  
NAME AND FUNCTION

Gilles GUISET CTLEF Chef Service Contrôle  
Computer controlled signature



VISA DGAC

Signataire habilité  
Agrément JAR 21 DGAC FG097

--- TRUE COPY CERTIFICATION ---

**DEUTSCHE NICKEL GMBH**

Rosenweg 15, 58239 Schwerte, Germany

**Certificat de Réception****EN 10204 - 3.1**

No.: 1217 / 2012

ATELIERS DE LA HAUTE GARONNE  
ETS AURIOL & CIE  
ZI FLOURENS  
F - 31131 BALMANo. de la Commande:  
113722MPRVNo. de la Confirmation:  
80133201 / 3Matériel: Silvern 400  
No. de mat.: 2.4360  
Demi-produits: fil  
Dimension: dia. 3,120 mmSpécification: SFT/MO Rev.E du 12.1.2011  
État de livraison: étire à froid, recuit, qualité rivetPoids-net:  
232,50 kgNombre des Pièces:  
1 caisseCoulée-No.:  
63061**RÉSULTAT DE MESURE**

Composition chimique (% de masse):

Al	Co	Cu	C	Fe	Mn	Si
0,005	0,02	33,46	0,098	1,62	0,92	0,060
S	Ni					
0,0010	63,77					

Résistance à la traction [MPa]  
Résistance au cisaillement [MPa]  
Allongement à la rupture AL=50 [%]  
Grosseur du grain ASTM E112  
defect de surface, max. profondeur [µm]587 - 593  
368 - 370  
37,0 - 41,0  
10,0  
8

Notre system d'assurance qualité est homologué sous le numéro 922141 chez Lloyd's Register Quality Assurance.

Schwerte, 02.04.2012

L'expert



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXaerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MPR DATE	EXP DATE
13	300	EA	MS20601AD4W3		87971281	CHERRY AEROSPACE SAN	11815		

  
\_\_\_\_\_  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15



**CHERRY®**  
AEROSPACE  
SPS Fastener Division, a PCC Company

Cherry Aerospace  
1224 East Warner Avenue  
Post Office Box 2157  
Santa Ana, CA 92707-0157  
USA



# PACKING-LIST

Order No: S0384202  
Order Date: 06/06/14  
Print Date: 09/16/14

Page: 1



Sold-To: 10015341

Ship-To: 10043053

S O L D T O	B/E AEROSPACE
	PO BOX 025263
	MIAMI, FL 33102-5263
	USA

S H I P T O	B/E AEROSPACE INC,
	CONSUMABLES MANAGEMENT
	9835 NW 14TH ST
	MIAMI, FL 33172
	USA

Salesperson (s):110

Purchase Order: 0YNB23

Credit Terms: NET 30  
Net 30

Ship Via: FED EX NATIONAL CL  
FOB: Origin - Collect

## Remarks:

IF UNDER 150# SHIP FEDEX GROUND COLLECT ACCOUNT# 0331-0149-0  
IF OVER 150# SHIP FED EX NATIONAL ACCOUNT# 018757 - DO NOT INSURE  
DO NOT PREPAY AND ADD TO ANY OF THE ABOVE METHODS  
DO NOT SHIP EARLIER THAN TWO (2) WEEKS PRIOR TO DUE DATE, UNLESS SPECIFIED.

\*\*\*\*\*  
BRITISH AEROSPACE APPROVAL# BAe/AG/30158/MAA to BAe/AG/QC/SC1 PART 3  
AIRBUS APPROVAL# 30114  
\*\*\*\*\*

GOODS OF UNITED STATES ORIGIN

**TEST REPORTS ENCLOSED**

ECCN: EAR99

**DO NOT DESTROY**

\*IF APPLICABLE, PART MEETS DFARS CLAUSE 252.225-7009 ALT I  
\*PREFERENCE FOR DOMESTIC SPECIALTY METALS

\*\*\*\*\*  
Unless otherwise specified on this order, Cherry will manufacture and  
certify parts to the part number's latest revision. Latest revisions are  
shown at <https://bizpartner.cherryaerospace.com/partrevisions.htm> under  
"Part Number Revision List".  
\*\*\*\*\*

INCORRECT AND UNAVAILABLE PART NUMBERS WILL BE LINED OUT ON PO  
CHERRY AEROSPACE DOES NOT ACCEPT CLAUSE V IN REGARDS TO ISO17025- CHERRY  
IS COMPLIANT TO NADCAP REQUIREMENTS ONLY

Ln	Item Number	Site T Location	Lot/Serial	Qty Open Qty to Ship	UM	Promised Shipped	
1	CR9162-4-03	1600			EA	10/09/14	
	Customer Item: MS20601AD4W3						
		D0603	87971281	24300.0		( )	

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited

## CERTIFICATION

## ATTENTION: PURCHASING DEPARTMENT

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications. Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

Quality Assurance Representative

Signed

SIM NGUYEN



**CHERRY®**  
**AEROSPACE**

SPS Fastener Division, a PCC Company

Cherry Aerospace  
1224 East Warner Avenue  
Post Office Box 2157  
Santa Ana, CA 92707-0157  
USA



## PACKING LIST

Order No: SO384202  
Order Date: 06/06/14  
Print Date: 09/16/14

Page: 2



Sold-To: 10015341



Ship-To: 10043053

S  
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B/E AEROSPACE  
PO BOX 025263  
MIAMI, FL 33102-5263  
USA

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B/E AEROSPACE INC,  
CONSUMABLES MANAGEMENT  
9835 NW 14TH ST  
MIAMI, FL 33172  
USA

Ln	Item Number	Site T Location Lot/Serial	Qty Open Qty to Ship	UM	Promised Shipped
1		10505 87836273	17300.0	( )	

**TEST REPORTS ENCLOSED**  
**DO NOT DESTROY**

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited

#### CERTIFICATION

#### ATTENTION: PURCHASING DEPARTMENT

#### Quality Assurance Representative

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Signed

SIM NGUYEN

**CHERRY AEROSPACE**

SPS Fastener Division, a PCC Company

Chemical Processing  
Heat Treating  
ISO/IEC 17025  
Material Testing Lab1224 East Warner Avenue  
Santa Ana, CA 92707-0157**Final Inspection & Test Report**  
**Cherry® Rivet****An ISO9001 and AS9100 registered company. OASIS #6111041606**

Part Numbers	Rev	Proc. Spec.	Rev
CR9162-4-03	P	MIL-R-7885	D2
** See 2nd Page for the Customer Parts			

Lot I.D. No.: **87971281**Lot Size: **24,300**MFG. Date: **September 16, 2014****ASSEMBLY DATA**

TYPE	ID #	CERT #	MATERIAL	FINISH	LUBE
Rivet	87971281	A74728	2117/ QQ-A-430	MIL-C-5541	Par-90
Stem	87971285	A74944	2017/ QQ-A-430	MIL-C-5541	None

W.O. #: 5553304

Final Lube: None

**QUALITY CONFORMANCE/ACCEPTANCE RESULTS**

MIN REQ'D SAMPLE SIZE SPECS	INSTALLED SHEAR		SPINDLE RETENSION	
	240		15	
	9		9	
RESULTS	494	492	64	46
LOAD VALUES IN POUNDS	503		51	
	493		56	
	491		45	
	486		46	
	490		62	
	503		50	
	485		58	

PCS. ITEM  
**20** **EXAMINATION**STATUS  
**PASS**PCS. ITEM  
**13** **INSTALLATION (Min and Max Grips)**STATUS  
**PASS****Comments:**Blind Fastener  
Refer to email from J. John Park Standards Engineer Association to Soheil Eshraghi. Dated on 1/25/2012 regarding the B diameter tolerance to be +/- 0.004Tr. Rev.: 1  
Rev. Date: 9/17/2014Inspector  
**S Nguyen**

Insp. Control #:

The parts contained in this shipment have been manufactured and inspected in accordance with TSO-C148. The conditions and tests required for TSO approval of this article are minimum performance standards. Aircraft fasteners approved under this TSO are not necessarily interchangeable with other aircraft fasteners approved under this TSO. Fasteners of similar dimensional properties may have widely varying performance and metallurgical properties. Substitution of parts may only be done if acceptable to or approved by the Administrator.

This test report shall not be reproduced except in full, without the written approval of the laboratory.  
The recording of false, fictitious, or fraudulent statement or entries on the certificate may be punished as a felony under Federal law.



# BENEKE

## Product Certification And Testing Report

Customer:  
CHERRY AEROSPACE LLC  
ATTN: ACCTS. PAYABLE  
1224 EAST WARNER AVENUE  
P.O. BOX 2157

SANTA ANA CA 92707-0157

Date >> 4/15/2014

Customer PO No.	BWC Lot No.	Date Shipped
PO164101	25886	4/15/2014
Cust Item ID : M262.1230		

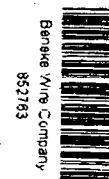
BWC Item No.  
2H1230813041A01

Description:  
.123" DIA. +- .0005" 4F 2117 - H13  
#4 FINISH, ALUMINUM COLD HEADING WIRE X 22"  
BLOCKWOUND 100# COILS.

Specifications:  
CUST SPEC M-262 REV. F  
FED SPEC QQ-A-430 REV. C

Chemical Limits										Test Results				
Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others Each	Others Total	Aluminum Remainder	Case No.	lbs	Grain Size
2117	.8	.7	2.2 - 3.0	.20	.20 - .50	.10	.25		.05	.15				
852763	.46	.40	2.8	.14	.46	.07	.14							
										41874-1	224	0.1230	29,930.0	355.6
										Total Weight: 224				

APR 24 2014



A74728

### Beneke Wire Company

WE CERTIFY THAT SAMPLES REPRESENTING THE MATERIAL COVERED IN THIS REPORT HAVE BEEN INSPECTED AND FOUND TO MEET THE COMPOSITION LIMITS AND MECHANICAL PROPERTIES SHOWN ABOVE. ANY WARRANTY IS LIMITED TO THAT SHOWN ON BENEKE WIRE COMPANY'S STANDARD TERMS AND CONDITIONS OF SALE.

Authorized  
Signature

*Shannon King*

Shannon King, Plant Metallurgist

Phone: (502) 367-6434

5540 National Turnpike

Louisville, KY 40214

# KAISER ALUMINUM FABRICATED PRODUCTS

*Best in Class*

## CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

Kaiser Aluminum Fabricated Products, LLC  
600 Kaiser Drive  
Heath, OH 43056-1088  
740-522-1151

### Miscellaneous Notes

Made in USA

Chemical exceptions Fe 0.30-0.7 Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. Actual (Act) chemical composition is from representative samples taken during the ingot casting process. Independent chemical analysis will vary from these values because of natural variation in the process and testing error. This test report shall not be reproduced, except in full, without the written approval of Kaiser Aluminum. The recording of false, fictitious, or fraudulent statements or entries on the certificate may be punished as a felony under federal law. Chemical analysis performed in accordance with ASTM E 1251-11. The Newark facility is AS9100C:2009 approved. The Newark Laboratory is NADCAP approved for chemical testing (OES).

The products you inquired and ordered are not governed by any applicable industry standard or custom specifications. They are produced, tested and released as such. By placing an order, you acknowledge and accept the full responsibility and liability for their fitness for the intended end use or end uses.

### CERTIFICATION

Kaiser Aluminum Fabricated Products, LLP ("Kaiser") hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales order acknowledgement form. Any warranty is limited to that shown on Kaiser's standard general terms and conditions.

Steven J. Tua, Technical Manager

*Steven J. Tua*

APR 24 2014



Bondie Wire Company  
852763



A74728

Plant Serial: 35516

Kaiser Order Number: 172560092

Line Item: 1

# BENEKE

## Product Certification And Testing Report

Customer:

CHERRY AEROSPACE LLC  
ATTN: ACCTS. PAYABLE  
1224 EAST WARNER AVENUE  
P.O. BOX 2157

SANTA ANA

CA 92707-0157

Date >> 5/22/2014

Customer PO No.	BWC Lot No.	Date Shipped:
PO165732	26142	5/22/2014
Cust Item ID: M051-0980		

BWC Item No.  
2F09808T3741A01

Description:

.098" DIA. + - .0005" 4F 2017 - T37  
#4 FINISH, ALUMINUM COLD HEADING WIRE X 22"  
BLOCKWOUND 100# COILS.

Specifications:

CUST SPEC M-51 REV. L  
FED SPEC QQ-A-430 REV. C

Chemical Limits											Test Results								
Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others Each	Others Total	Aluminum Remainder	Case No.	lbs	Diameter (in)	Tensile (psi)	Yield (psi)	Peak Load (lbs)	EL %	Grain Size
2017	.20 - .8	-.7	3.5 - 4.5	.40 - 1.0	.40 - .8	-.10	-.25	-.15	.05	.15									
852901	.28	.17	3.9	.47	.49	.00	.01	.01											
												42235-1	337	0.0982	67,440.0		510.8		
												42235-2	214	0.0982	69,380.0		525.5		

Total Weight: 551

JUN - 2 2014



### Beneke Wire Company

WE CERTIFY THAT SAMPLES REPRESENTING THE MATERIAL COVERED IN THIS REPORT HAVE BEEN INSPECTED AND FOUND TO MEET THE COMPOSITION LIMITS AND MECHANICAL PROPERTIES SHOWN ABOVE. ANY WARRANTY IS LIMITED TO THAT SHOWN ON BENEKE WIRE COMPANY'S STANDARD TERMS AND CONDITIONS OF SALE.

Authorized  
Signature

*Shannon King*

Shannon King, Plant Metallurgist

Phone: (502) 367-6434

5540 National Turnpike

Louisville, KY 40214

Beneke Wire Company  
852901



A74944

# **KAISER ALUMINUM**

**FABRICATED PRODUCTS**

*Best in Class*

## **CERTIFIED TEST REPORT**

<http://Online.KaiserAluminum.com>

Kaiser Aluminum Fabricated Products, LLC  
600 Kaiser Drive  
Heath, OH 43056-1088  
740-522-1151

### **Miscellaneous Notes**

Made in USA

Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. Actual (Act) chemical composition is from representative samples taken during the ingot casting process. Independent chemical analysis will vary from these values because of natural variation in the process and testing error. This test report shall not be reproduced, except in full, without the written approval of Kaiser Aluminum. The recording of false, fictitious, or fraudulent statements or entries on the certificate may be punished as a felony under federal law. Chemical analysis performed in accordance with ASTM E 1251-11. The Newark facility is AS9100C:2009 approved. The Newark Laboratory is NADCAP approved for chemical testing (OES).

The products you inquired and ordered are not governed by any applicable industry standard or custom specifications. They are produced, tested and released as such. By placing an order, you acknowledge and accept the full responsibility and liability for their fitness for the intended end use or end uses.

### **CERTIFICATION**

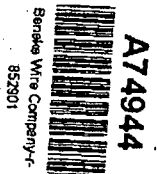
Kaiser Aluminum Fabricated Products, LLP ("Kaiser") hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales order acknowledgement form. Any warranty is limited to that shown on Kaiser's standard general terms and conditions.

Steven J. Tua, Technical Manager

*Steven J. Tua*



JUN - 2 2014



Plant Serial: 35884  
Kaiser Order Number: 172563482  
Line Item: 1

# KAISER ALUMINUM FABRICATED PRODUCTS

*Best in Class*

## CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

Kaiser Aluminum Fabricated Products, LLC  
600 Kaiser Drive  
Heath, OH 43056-1088  
740-522-1151

CUSTOMER PO NUMBER:		CUSTOMER PART NUMBER:		PRODUCT DESCRIPTION:	
				ALY-JUMBO	
KAISER ORDER NUMBER:	LINE ITEM:	SHIP DATE:	ALLOY:	TEMPER:	
172563482	1	04/14/2014	KN17		
WEIGHT SHIPPED:	QUANTITY:	B/L NUMBER:	DIAM/DAF/THKNS:	WIDTH:	LENGTH:
7610 lbs.	33 pcs.	9617		0.000 in.	0.0 in.
SHIP TO:			SOLD TO:		
BENEKE WIRE COMPANY 5540 NATIONAL TURNPIKE LOUISVILLE, KY 40214			BENEKE WIRE COMPANY 5540 NATIONAL TURN PIKE LOUISVILLE, KY 40214		

Test Code: 2415

### Actual Physical Properties

Lot No.	No. Tests		WGE %	WGU ksi	WGY ksi
852901	2	MIN	30.7	24.8	12.5
		MAX	33.3	25.0	12.5

### Chemical Composition, WT. % (Aluminum Remainder)

Lot Cast/Drop ChemID		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Zr
852901 9-2F2 189431	Act.	0.28	0.17	3.9	0.47	0.49	0.00	0.01	0.01	0.00
Chemical Limits	Min	0.20	0.15	3.5	0.40	0.40				
	Max	0.40	0.30	3.90	0.60	0.60	0.04	0.03	0.15	0.05
	Others	Each	0.05	Max			Total	0.15	Max	

Beneke Wire Company  
852901

A74944

JUN - 2 2014



Plant Serial: 35884  
Kaiser Order Number: 172563482  
Line Item: 1

# KAISER ALUMINUM FABRICATED PRODUCTS

*Best in Class*

## CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

Kaiser Aluminum Fabricated Products, LLC  
600 Kaiser Drive  
Heath, OH 43056-1088  
740-522-1151

CUSTOMER PO NUMBER:		CUSTOMER PART NUMBER:		PRODUCT DESCRIPTION:	
				ALY-JUMBO	
KAISER ORDER NUMBER:	LINE ITEM:	SHIP DATE:	ALLOY:	TEMPER:	
172560092	1	03/21/2014	2117		
WEIGHT SHIPPED:	QUANTITY:	B/L NUMBER:	DIAM/DAF/THKNS:	WIDTH:	LENGTH:
5260 lbs.	23 pcs.	9419		0.000 in.	0.0 in.
SHIP TO:			SOLD TO:		
BENEKE WIRE COMPANY 5540 NATIONAL TURNPIKE LOUISVILLE, KY 40214			BENEKE WIRE COMPANY 5540 NATIONAL TURN PIKE LOUISVILLE, KY 40214		

Test Code: 8000

### Actual Physical Properties

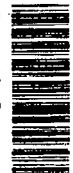
Lot No.	No. Tests	WGU ksi
---------	-----------	------------

852763	1	MIN 21.7 MAX 21.7
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### Chemical Composition, WT. % (Aluminum Remainder)

Lot Cast/Drop ChemID		Si	Fe	Cu	Mn	Mg	Cr	Zn
852763								
2-2F2	Act.	0.46	0.40	2.8	0.14	0.46	0.07	0.14
188927								
Chemical	Min			2.2		0.20		
Limits	Max	0.8	0.7	3.0	0.20	0.50	0.10	0.25
	Others	Each	0.05	Max		Total	0.15	Max

Beneke Wire Company-  
852763



A74728

APR 24 2014



Plant Serial: 35516  
Kaiser Order Number: 172560092  
Line Item: 1



**CHERRY** AEROSPACE  
SPS Fastener Division, a PCC Company

1224 East Warner Avenue  
Santa Ana, CA 92707-0157



Accredited

**Nadcap**  
Chemical Processing  
Heat Treating  
ISO/IEC 17025  
Material Testing Lab

## Final Inspection & Test Report

### Cherry® Rivet

An ISO9001 and AS9100 registered company. OASIS #6111041606

Lot I.D. No.: 87971281

Rev: 1

## Customer Parts List

<u>Customer Part Number</u>	<u>Rev</u>	<u>Proc. Spec.</u>	<u>Rev</u>
MS20601AD4W3	1	MIL-R-7885	D2



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172

### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
20	120	EA	MS21047L06		UC125	ALCOA FASTENING/REPU	52828		

  
Jason Lewis  
Senior Director, Global Quality

01/20/15

Inv # 01/20/15



DATE: 1/28/10

TIME: 12:51:13

AIRSUPPLY DIVISION  
70 HCS ROANOKE  
RECEIPT TRAVELLER: A1283039

PAGE: 20

WSID: APEJA1

VENDOR: 18270  
REPUBLIC FASTENER MFG. CORP.

PURCHASE ORDER: 887080

DATE RECEIVED: 1/28/10

BUYER: TDR



H-S

RECEIVING:

LINE QUANTITY PART NO./DESCRIPTION  
ITEM RECEIVED



1 53000 MS21047L06  
NUT PLATE



VENDOR ITEM#:

DASH GROUP: MS21047L

QUALITY PROCUREMENT CLAUSES: ABCEHPUV

REV: 2

Std Pkg Size:

QUALITY ASSURANCE:

DEPT. WORK OPERATION/DESCRIPTION  
NO. CENTER NUMBER

SCHEDULE  
DATE

SAMPLE SIZE	QUANTITY ACCEPTED	QUANTITY REJECTED	MANUFACTURER LOT	BATCH NO.	CURE DATE	HPG LOT #
----------------	----------------------	----------------------	---------------------	--------------	--------------	-----------

200	53000	0	UC125	-	-	1002002255
Quality Documents: A Manufacturer's C of C						
E Chem-Phys or Material Cert						
Manufactured by: 18270 REPUBLIC FASTENER MFG. CORP.						

1111157

INSPECTION NOTES:

STAGING: WAREHOUSE NUMBERS

LOCATION ADDRESS

QUANTITIES

LOC: ATCUST D10601

<<< End of Form >>>



REPUBLIC FASTENER MANUFACTURING CORPORATION  
1300 RANCHO CONEJO BOULEVARD, NEWBURY PARK, CA 91320 (805) 498-6621

### CERTIFICATE OF TEST

WE HEREBY CERTIFY THAT ALL MATERIALS USED IN THE MANUFACTURE OF PARTS COVERED BY THE REPORT CONFORM TO THE MATERIAL SPECIFICATIONS CALLED FOR BY THE PURCHASE ORDER. WE FURTHER CERTIFY THAT THE PARTS ARE MANUFACTURED IN ACCORDANCE WITH APPLICABLE DRAWINGS OR SPECIFICATIONS CURRENT ON THE DATE OF MANUFACTURE. TEST REPORTS COVERING MATERIALS IN THESE PARTS AND INDICATING CONFORMANCE WITH APPLICABLE SPECIFICATIONS ARE ON FILE AND SUBJECT TO EXAMINATION. PARTS AS SHIPPED HAVE NEVER BEEN IN CONTACT WITH MERCURY. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT WRITTEN APPROVAL OF THE LABORATORY.

PARTS MANUFACTURED IN: ☒ U.S.A ☐ MEXICO

☐ IN ACCORDANCE WITH: DFAR 252.225.7014 ALT. I

Delfina Martinez  
Signature of Quality Assurance Representative

1-08-10  
Date

P.O.:	887080	Part No.	MS21047L06 REV.2
Quantity Ordered:	53,000	Date Cert Ordered:	1-08-10
Customer:	HONEYWELL CONSUMABLES SOL	Lot No.:	UC125
Description:	PLATE NUT	Procurement Spec:	NASM25027
Also Certified To:	NAS680A06 REV.10	Additional Info:	N/A

### IF APPLICABLE, CHECK ONE BELOW:

- ☐ **FAA CERTIFICATION (PMA):** IT IS HEREBY CERTIFIED THAT (A) THE PARTS AND/OR MATERIALS REFLECTED HERE-IN WERE PRODUCED UNDER FEDERAL AVIATION ADMINISTRATION APPROVED MANUFACTURING AND QUALITY CONTROL SYSTEMS/METHODS AS SET FORTH IN FEDERAL AVIATION REGULATION, PART 21, SUB-PART K, PARAGRAPH 21.303 AND (B) ALL PARTS AND/OR MATERIALS ARE CERTIFIED NEW, CONFORMS TO THE DESIGN DATA AND ARE IN AIR WORTHY CONDITION.

\_\_\_\_\_  
Signature of Quality Assurance Representative

\_\_\_\_\_  
Date

- ☐ **TSO-C148 STATEMENT:** THE PARTS CONTAINED IN THIS SHIPMENT HAVE BEEN MANUFACTURED AND INSPECTED IN ACCORDANCE WITH TSO-C148. THE CONDITIONS AND TESTS REQUIRED FOR TSO APPROVAL OF THIS ARTICLE ARE MINIMUM PERFORMANCE STANDARDS. AIRCRAFT FASTENERS APPROVED UNDER THIS TSO ARE NOT NECESSARILY INTERCHANGEABLE WITH OTHER AIRCRAFT FASTENERS APPROVED UNDER THIS TSO. FASTENERS OF SIMILAR DIMENSIONAL PROPERTIES MAY HAVE WIDELY VARYING PERFORMANCE AND METALLURGICAL PROPERTIES. SUBSTITUTION OF PARTS MAY ONLY BE DONE IF ACCEPTABLE TO OR APPROVED BY THE ADMINISTRATOR.

\_\_\_\_\_  
Signature of Quality Assurance Representative

\_\_\_\_\_  
Date



REPUBLIC FASTENER MANUFACTURING CORPORATION  
1300 RANCHO CONEJO BOULEVARD, NEWBURY PARK, CA 91320 (805) 498-6821

## QUALITY CONTROL INSPECTION REPORT

LOT NUMBER	BPS-A-70 ATTRIBUTE PLAN			NOTE	26027 ATTRIBUTE PLAN		
	LOT SIZE	BS	ACC		LOT SIZE	BS	ACC
UC125	UNDER 5	2	0		UNDER 15A	5	0
	5 - 1000	3	0		10A - 1000	10	0
	101 - 1000	4	0		10A - 1000	15	0
	101 - 1000	5	0		10A - 1000	20	0
	101 - 1000	6	0		10A - 1000	25	0

### TORQUE TEST

DATE 6-8-09

STAMP

TEST BOLT MS16997-06 MAX 10.0 IN. LBS. (1st ON) MIN 1.0 IN. LBS. (1st BRK)

CY	ON	BRK	ON	BRK	ON	BRK	ON	BRK	ON	BRK	ON	BRK	ON	BRK
1	5.0	5.5	6.5	6.0	7.0	5.5	6.0	5.0	6.5	5.5	7.5	6.5	8.5	9.0
7	2.5	3.0	4.5	3.5	4.5	4.0	5.0	4.0	3.5	3.5	5.5	5.0	5.0	4.5
15	2.5	2.5	4.5	4.0	4.5	4.0	4.0	4.0	3.5	3.5	4.5	4.5	4.0	4.0
1	6.5	5.5	7.0	6.0	6.0	4.0	6.0	4.5	7.0	5.5	7.0	6.0	7.0	6.0
7	3.5	2.5	4.0	4.0	3.0	3.0	3.0	3.0	3.5	3.5	3.5	3.0	4.5	4.0
15	3.5	2.5	4.0	3.5	3.0	2.5	3.0	3.0	3.5	3.5	3.5	3.5	4.0	4.0
1	6.5	6.0	9.0	8.0	8.5	6.5	6.0	5.0	7.5	7.0	7.0	6.0	8.0	7.0
7	4.0	3.5	5.5	5.5	4.5	3.5	4.0	3.5	5.0	4.0	4.0	3.5	5.0	4.0
15	3.5	3.5	6.0	5.0	4.0	3.5	3.5	3.5	4.5	4.5	4.0	4.0	4.5	3.5
1	7.0	6.5	5.5	5.0	6.0	5.0	7.5	7.0	7.0	6.0	6.0	5.0		
7	4.5	4.5	3.5	3.5	4.5	3.0	4.5	3.5	4.0	3.0	4.0	3.5		
15	4.5	4.5	3.0	3.0	3.5	3.5	4.0	3.5	4.0	3.5	3.5	3.0		

### HARDNESS TEST

CONVERTED FROM SCALE TO HRC

DATE 5-30-09

REQUIREMENT: HRC 34 TO 34

STAMP

HRC	38	38	37	38	38	38	38	37	38	38	38	36	38	38	38
50N	57.5	57.5	56.5	57.5	57.5	57.5	57.5	56.5	57.5	57.5	57.5	56.5	57.5	57.5	57.5
15N															

☆ CLIPS AND CLIP AUTS ONLY

## CERTIFIED TEST REPORT



Calstrip Steel Corporation

REGISTERED COMPANY 20003

7140 Bardin Blvd. • Los Angeles, CA 90040-3387  
(323) 725-1345 • Fax (323) 721-4269

Customer: REPUBLIC FASTENER CO.  
Address: 1300 RANCHO CONEJO BLVD.  
NEWBURY PARK, CA 91320

Order Number: S50082 / W61674  
Customer PO: 14230  
Shipped Date: 04/07/2009  
Packlist ID: 83283

Part ID: R620.025-CS  
Description: HC.CR.1050.025X1.250XCOIL  
Drawing #: R620.025  
Rev #:

Material Spec: AMS-5083G, AMS QQS-700B, QQS-533,  
ASTM A682-05, ASTM A684-05

HeatID: 0474-001-006

### CHEMICAL ANALYSIS

C	Mn	P	S	Si	Ni	Cr	Cu	Mo	Rest
0.4918	0.7080	0.0191	0.0041	0.2100	0.0200	0.0600			
W	V	Sn	Ti	Al	Ca	Zr	Co	N	B

### MECHANICAL AND PHYSICAL PROPERTIES

Yield	Tensile	Elong %	Hardness	Bend Test
			HRB 83	OK
Grain Size	Olsen Test	Spher%	Decarb	Reduct %
8		100	D	

Skid Numbers	# of Coils	Weight
W61674-1	10	2,410
W61674-2	10	2,395
	20	4,805

Comment: SOURCE: HANKUM (KOREA)  
CUSTOMER APPROVED HARDNESS ON 5/6/09.



09-613

All work on this order has been performed in accordance with the Company's Quality Assurance Manual.

MARIO VARGAS Technical Services

Form #:

Print Date: 4/7/2009

Page: 2



Lot Number						INSPECTION
UC125						RELEASE DATE
SAMPLE SIZE	CHARACTERISTIC DESCRIPTION	INSPECTION MEDIA	1ST ARTICLE	DEFECT	ACCEPT/REJECT	RELEASE DATE
NUT	MATERIAL: CAL STRIP HEAT: 0474-001-006 SIZE: 0.25 x 1.250	VENDOR CERTIFICATIONS ALLOY VERIFICATION	REN 27	0	ACC	9/6/09
CAP	MATERIAL: HEAT: SIZE:	VENDOR CERTIFICATIONS ALLOY VERIFICATION		N/A		
BASKET	MATERIAL: HEAT: SIZE:	VENDOR CERTIFICATIONS ALLOY VERIFICATION		N/A		
CLIP	MATERIAL: HEAT: SIZE:	VENDOR CERTIFICATIONS ALLOY VERIFICATION		N/A		
15 PCS	AMS5732, AMS5525 STAINLESS ONLY! AGED LOAD	TENSILE R/C HARDNESS TESTER		N/A		
15 PCS	AMS-H-6875A, MIL-H-6875 STEEL ONLY! AUSTEMPERING LOAD 29129	TENSILE R/C HARDNESS TESTER		0		9/1/09
SEE LOG	AMS2412; [ ] AMS2411D [ ] SILVER PLATING LOAD	VISUAL ADHESION & THICKNESS ASTM B597		N/A		
SEE LOG	AMS-QQ-P-416B Class 11 P2113 CAD PLATING LOAD 0318	VISUAL ADHESION & THICKNESS ASTM B667		0		9/1/09
13 PCS	EMBRIITLEMENT RELIEF BAKE 375°F ±25° FOR 23 HOURS MIN. CAD PLATING LOAD 0318	23 [ ] NUT 48-50 [ ] CLIP HOUR STRESS AT ROOM TEMP. PER NASM1312, TEST 14		0		9/1/09
5 PCS	EMBRIITLEMENT RELIEF BAKE 375°F ±25° FOR 23 HOURS MIN. CAD PLATING LOAD	98 [ ] HOUR STRESS AT SERVICE TEMP. PER NASM1312, TEST 14		N/A		
ASQC Z14	GOLD CHROMATE TREATMENT TYPE II	VISUAL - WORKMANSHIP SALT SPRAY TEST OF AMS-QQ-P-415		0		9/1/09
SEE LOG	PASSIVATED PER AMS-QQ-P-35 AMS2703 STAINLESS STEEL ONLY!	VISUAL SALT SPRAY TEST PER ASTM B117		N/A		
ASQC Z14	MAGNETIC PERMEABILITY <2.0 (AIR 1.0) FOR A FELD STRENGTH = 2X COERSTES	INDICATOR PER ASTM A342-04 PER ASTM B117		N/A		
SEE LOG	NON-DESTRUCTIVE TESTING DISCONTINUITIES SAMPLE [ ] 100% [ ]	MAGNETIC PARTICLE PER ASTM E1444 OR FLOURESCENT PENET. PER ASTM E1417		N/A		
15 PCS	DRY F LUBRICANT PER AS272 TYPE 1 BATCH NO: PC09841	VISUAL - WORKMANSHIP ADHESION, THICKNESS SALT SPRAY TEST OF NASM1312, TEST 1		0		9/1/09
8 PCS 15 PCS	MICROSTRUCTURE	BPS-N-70 [ ] NAS3350 [ ]		0		9/1/09
ASQC Z14	IT-READS PER MIL-S-8876, AS8876	MET-OD B, SYSTEM 22		0		9/1/09

## CC-BY 4.0

SHIPPER

SOLD TO HONEYWELL CONSUMABLES SOL P.O. BOX 981157 EL PASO, TX 79998	SALESMAN NO. 237096	DATE 01/00/10	NUMBER 165539
--	------------------------	------------------	------------------



REPUBLIC FASTENER MFG. CORP.  
1300 RANCHO CONEJO BLVD.  
NEWBURY PARK, CALIF 91320  
PHONE: (805) 498-6621

SAME

CUSTOMER NO. 3393	CUSTOMER P.O. NO. 887080	ORDER DATE 03/03/08	REBATE YES	SHIPPED VIA FEDEX NATIONAL	TERMS: NET 30 DAYS
----------------------	-----------------------------	------------------------	---------------	-------------------------------	-----------------------

100000	100000	0	1		NUT SELF LOCKING MS-1047L06
	53000	FROM LOT	#:	UC125	1 CTNS @ 38 LBS EA 1 CTNS @ 36 LBS EA
	47000	FROM LOT	#:	WE042B	1 CTNS @ 35 LBS EA 1 CTNS @ 31 LBS EA
1	1	0	2		TR
	1	FROM LOT	#:	0000	0 CTNS @ 0 LBS EA
					MS & NAS REV LATEST; CERT REQ
					PULL 12/21/09
					TOTAL CARTONS 4 TOTAL WEIGHT 140 LBS

WE HEREBY CERTIFY THAT ALL MATERIALS USED IN THE MANUFACTURE OF PARTS COVERED BY THIS REPORT CONFORM TO THE MATERIAL SPECIFICATIONS CALLED FOR BY THE ABOVE PURCHASE ORDER. WE FURTHER CERTIFY THAT THE PARTS WERE MANUFACTURED IN ACCORDANCE WITH ALL RELEVANT DRAWINGS OR SPECIFICATIONS THEREBY RELATING. TEST REPORTS COVERING MATERIALS IN THESE PARTS, AND INDICATING CONFORMANCE WITH APPLICABLE SPECIFICATIONS, ARE ON FILE AND SUBJECT TO EXAMINATION.


We hereby certify that these goods were produced in compliance with all applicable requirements of Sections 6, 7, and 12 of the Fair Labor Standards Act, as amended, and of the regulations and orders of the United States Department of Labor issued under Section 14 thereof.

THE LIABILITY OF SELLER ON PARTS FOUND TO BE DEFECTIVE IS LIMITED TO REPLACEMENT OR REWORK OF SUCH GOODS. AT SELLER'S OPTION, SELLER MAY, AT HIS DISCRETION, REFUND THE INVOICE VALUE OF SUCH GOODS. UNDER NO CIRCUMSTANCE WILL SELLER BE LIABLE FOR DAMAGES OR COSTS INCURRED BY BUYER OR USER, BUT NOT EXCEED THE INVOICE VALUE OF SUCH GOODS. UNDER NO CIRCUMSTANCE WILL SELLER BE LIABLE FOR DAMAGES OR COSTS INCURRED BY BUYER OR USER BEYOND THE INVOICE VALUE OF SAID PARTS. BUYER SHOULD BE AWARE THAT IF SUBJECT GOODS ARE REWORKED BY OTHER THAN SELLER OR SUBJECT TO ADDITIONAL PROCESSING ALL WARRANTIES PROVIDED BY SELLER ARE DECLARED NULL AND VOID AND SELLER ASSUMES NO LIABILITY FOR DAMAGES INCURRED BY BUYER OR SUBSEQUENT USERS. THIS WARRANTY IS VOID IF SELLER IS NOT NOTIFIED IN WRITING OF ANY REJECTIONS WITHIN 90 DAYS AFTER RECEIPT OF MATERIALS BY CUSTOMER.



## PACKING LIST

SHIPPER

SOLD TO HONEYWELL CONSUMABLES SOL P.O. BOX 981157  EL PASO, TX 79998		SALESMAN NO. 237096	DATE 01/04/10	NUMBER 165539 165539
SHIP TO HONEYWELL CONSUMABLES SOL 9835 NW 14TH STREET  MIAMI, FL 33172 BUYER LYSETTE		 <b>REPUBLIC FASTENER MFG. CORP.</b> 1300 RANCHO CONEJO BLVD. NEWBURY PARK, CALIF 91320 PHONE: (805) 498-8621		

CUSTOMER NO. 3393	CUSTOMER P.O. NO. 887080	ORDER DATE 03/03/08	RESALE YES	SHIPPED VIA FEDEX NATIONAL	TERMS: 1/2 - 10 DAYS - NET 30
ORDER QUAN.	SHIP. QUAN.	BAL. DUE	LINE	RFM LOT NO.	DESCRIPT. / PART NO. / CARTONS - WT.
100000	100000	0	1		NUT SELF LOCKING MS21047L06 1 CTNS @ 38 LBS EA 1 CTNS @ 36 LBS EA 1 CTNS @ 35 LBS EA 1 CTNS @ 31 LBS EA
1	1	0	2		TR 0 CTNS @ 0 LBS EA
	1			0000	
					MS & HAS REV LATEST: CERT REQ
					FULL 12/21/09
					TOTAL CARTONS 4 TOTAL WEIGHT 140 LBS

ECCN 8A981 C/O US  
SCHD B 7818.16.0000


ANY CLAIM FOR SHORTAGES OR ADJUSTMENTS MUST BE MADE WITHIN 10 DAYS FROM RECEIPT OF GOODS


WE HEREBY CERTIFY THAT ALL MATERIALS USED IN THE MANUFACTURE OF PARTS COVERED BY THIS REPORT CONFORM TO THE MATERIAL SPECIFICATIONS CALLED FOR BY THE ABOVE PURCHASE ORDER. WE FURTHER CERTIFY THAT THE PARTS WERE MANUFACTURED IN ACCORDANCE WITH APPLICABLE DRAWINGS OR SPECIFICATIONS THEREBY RELATING TEST REPORTS COVERING MATERIALS IN THESE PARTS, AND INDICATING CONFORMANCE WITH APPLICABLE SPECIFICATIONS ARE ON FILE AND SUBJECT TO EXAMINATION.

We hereby certify that these goods were produced in compliance with all applicable requirements of Sections 6, 7, and 12 of the Fair Labor Standards Act, as amended, and of the regulations and orders of the United States Department of Labor issued under Section 14 thereof.

THE LIABILITY OF SELLER ON PARTS FOUND TO BE DEFECTIVE IS LIMITED TO REPLACEMENT OR REWORK OF SUCH GOODS, AT SELLERS OPTION, AND IN NO CASE IS TO EXCEED THE INVOICE VALUE OF SUCH GOODS. UNDER NO CIRCUMSTANCE WILL SELLER BE LIABLE FOR DAMAGES OR COSTS INCURRED BY BUYER OR SUBSEQUENT USER BEYOND THE INVOICE VALUE OF SAID PARTS. BUYER SHOULD BE AWARE THAT IF SUBJECT GOODS ARE REWORKED BY OTHER THAN SELLER OR SUBJECT TO ADDITIONAL PROCESSING ALL WARRANTIES PROVIDED BY SELLER ARE DECLARED NULL AND VOID AND SELLER ASSUMES NO LIABILITY FOR DAMAGES INCURRED BY BUYER OR SUBSEQUENT USERS. THIS WARRANTY IS VOID IF SELLER IS NOT NOTIFIED IN WRITING OF ANY REJECTIONS WITHIN 90 DAYS AFTER RECEIPT OF MATERIAL BY CUSTOMER.

## SHIPPER

SOLD TO HONEYWELL CONSUMABLES SOL P.O. BOX 981157  EL PASO, TX 79958		SALESMAN NO. 227096	DATE 01/08/10	NUMBER 165539
SHIP TO HONEYWELL CONSUMABLES SOL 7835 NW 14TH STREET  MIAMI, FL 33172 BUYER LYSETTE		 <b>REPUBLIC FASTENER MFG. CORP.</b> 1300 RANCHO CONEJO BLVD. NEWBURY PARK, CALIF 91320 PHONE: (805) 498-6621		

CUSTOMER NO. 3393	CUSTOMER P.O. NO. 007060	ORDER DATE 03/03/09	RESALE YES	SHIPPED VIA FEDEX NATIONAL	TERMS: 1/10 - 10 DAYS - NET 30
ORDER QUAN.	SHIP. QUAN.	BAL. DUE	LINE	RFM LOT NO.	DESCRIPT. / PART NO. / CARTONS - WT.
100000	100000	0	1		NUT SELF LOCKING M821047L06 1 CTNS @ 38 LBS EA 1 CTNS @ 36 LBS EA 1 CTNS @ 35 LBS EA 1 CTNS @ 31 LBS EA
	53000	FROM LOT #1		UC125	
	47000	FROM LOT #2		WEO42B	
1	1	0	2		TR
	1	FROM LOT #1		0000	0 CTNS @ 0 LBS EA
<div style="display: flex; justify-content: space-between;"> <div>  </div> <div> <b>ECCN 9A991 C/O US</b>  <b>SCHD B 7318.16.0000</b> </div> <div>           MS &amp; HAS REV LATEST; CERT REQ             PULL 12/21/09             TOTAL CARTONS 4 TOTAL WEIGHT 140 LBS         </div> </div>					

ANY CLAIM FOR SHORTAGES OR ADJUSTMENTS MUST BE MADE WITHIN 10 DAYS FROM RECEIPT OF GOODS

WE HEREBY CERTIFY THAT ALL MATERIALS USED IN THE MANUFACTURE OF PARTS COVERED BY THIS REPORT CONFORM TO THE MATERIAL SPECIFICATIONS CALLED FOR BY THE ABOVE PURCHASE ORDER. WE FURTHER CERTIFY THAT THE PARTS WERE MANUFACTURED IN ACCORDANCE WITH APPLICABLE DRAWINGS OR SPECIFICATIONS THEREBY RELATING TEST REPORTS COVERING MATERIALS IN THESE PARTS, AND INDICATING CONFORMANCE WITH APPLICABLE SPECIFICATIONS. ARE ON FILE AND SUBJECT TO EXAMINATION

We hereby certify that these goods were produced in compliance with all applicable requirements of Sections 6, 7, and 12 of the Fair Labor Standards Act, as amended, and of the regulations and orders of the United States Department of Labor issued under Section 14 thereof.

THE LIABILITY OF SELLER ON PARTS FOUND TO BE DEFECTIVE IS LIMITED TO REPLACEMENT OR REWORK OF SUCH GOODS, AT SELLERS OPTION, AND IN NO CASE IS TO EXCEED THE INVOICE VALUE OF SUCH GOODS. UNDER NO CIRCUMSTANCE WILL SELLER BE LIABLE FOR DAMAGES OR COSTS INCURRED BY BUYER OR SUBSEQUENT USER BEYOND THE INVOICE VALUE OF SAID PARTS. BUYER SHOULD BE AWARE THAT IF SUBJECT GOODS ARE REWORKED BY OTHER THAN SELLER OR SUBJECT TO ADDITIONAL PROCESSING ALL WARRANTIES PROVIDED BY SELLER ARE DECLARED NULL AND VOID AND SELLER ASSUMES NO LIABILITY FOR DAMAGES INCURRED BY BUYER OR SUBSEQUENT USERS. THIS WARRANTY IS VOID IF SELLER IS NOT NOTIFIED IN WRITING OF ANY REJECTIONS WITHIN 90 DAYS AFTER RECEIPT OF MATERIAL BY CUSTOMER.



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
 Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
 www.KLXaerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


## Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO27119**

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
26	150	EA	NAS391B6P		X7228	ANILLO INDUSTRIES	10630		

  
 Jason Lewis  
 Senior Director, Global Quality

01/20/15

Inv # 01/22/15

**ANILLO Industries, Inc.**

2090 NORTH GLASSELL STREET, ORANGE, CA 92865-3391 USA

PLEASE REMIT TO

P.O. BOX 5586 ORANGE, CA 92863-5586 USA

(714)637-7000 (562)924-6632 FAX(714) 637-3022

AS9100  
HACAP CP  
ISO 9001  
CERTIFIED**563916****Packing List &  
Certification**

WE ACCEPT

VISA/MASTER/DISCOVER/AMEX

<b>SOLD TO</b> B/E AEROSPACE, INC. ATTN: ACCOUNTS PAYABLE DEPT. P.O. BOX 025263  MIAMI, FL 33102-5263	<b>1165</b>	<b>SHIP TO</b> B/E AEROSPACE, INC. CONSUMABLES MANAGEMENT 9835 NW 14TH ST  MIAMI, FL 33172	<b>E</b>
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DATE ORDER REC'D <b>07/29/2013</b>	ORDER NUMBER <b>0RK46</b>	INVOICE DATE	SHIPPED VIA <b>FEDXG/033101490</b>	TERMS 1% 10 DAYS, NET 30
ITEM	ORDERED	SHIPPED	DESCRIPTION	NET WEIGHT

2 50,000 **48940** **NAS391B6P**  
REV 6 /LOT#X7228 /QCR:1,4,6,8,15,16,  
ECCN: 9A991 Schedule B#: 7415.21.0000 COO: USNLR

We certify that: 1. item number 2 above is manufactured in accordance with the material and processing specifications of this order.  
2. We certify that the material on this order conforms in all respects to the current applicable government and/or manufacturer's specification. Test reports are on file and are available for examination on all Anillo manufactured parts. All claims for errors or shortages must be made within 10 days after receipt of goods.  
No good to be returned without written authorization. All claims for defective material must filed within 30 days of shipment to receive consideration. We do not assume financial responsibility or liability from the use of products sold, other than the replacement value of the products sold, if claimed within the specified time limit above.

&lt;&lt; R.M.A.# REQUIRED FOR RETURNS &gt;&gt;

&lt;&lt; TO THE BEST OF OUR KNOWLEDGE, PARTS ARE MERCURY FREE &gt;&gt;

**Certification**

B/E Aerospace, Inc.  
Consumable Management  
Self Release

Signature & Stamp: Date: 4-6-14BY Ben Omidwar  
Ben Omidwar, Quality Assurance Manager

FI 4.03.05

# CERTIFICATE OF TEST

Customer: COPPER & BRASS SALES  
C/O C. & B WEST  
13338 ORDEN DR. BLDG H  
SANTA FE SPRINGS, CA 90670

Specification: ASTM B 36/B36M-08a

Customer PO No: 5520064271

PMX Order No: 059762-1

PMX Bill of Lading: 00120474

Customer Part No: CUFLR00593

Pallet / Tag No.: 355570 | C211LB-A2

## Chemical Composition (Wt %)

Test Date 02/05/13

Method (See below\*\*)

Element	Fe	Pb	Zn	Cu
Spec Min.	0.0000	0.0000	28.0000	68.5000
Spec Max.	0.0500	0.0700	31.5000	71.5000
Actual	0.0124	0.0023	30.6158	69.3504

## Dimensions

	Units/Scale	Spec. Min.	Spec. Max.	Actual
Thickness	in	.0155	.0165	.0163
Width	in	23.984	24.016	PASS

## Mechanical Properties

Test Date 02/20/13

Method

		Units/Scale	Spec. Min.	Spec. Max.	Actual
Tensile Strength	ASTM-E8-09	ksi	57.0	67.0	59.0
Yield Strength	(REF) ASTM-E8-09	ksi	NA	NA	47.0
Elongation	(REF) ASTM-E8-09	%	NA	NA	30
Hardness 1	(REF) ASTM-E18-08	30T	NA	NA	59
Hardness 2					
Grain Size		mm			

## Other Tests

Test Date

Method

Units/Scale

Spec. Min.

Spec. Max.

Actual

We certify that these test results were obtained from samples of the material lots identified above. The test procedures and material production conform to chemical and mechanical requirements of applicable customer and ASTM specifications. This document may not be reproduced, except in full, without the written approval of PMX Industries, Inc. \*Results obtained by a laboratory which is not accredited or compliant with ISO/IEC 17025 standard.

\*\*Chemistry is analyzed according to methods ASTM-E1621-05 and/or ASTM-E-1751-07. Country of Msh and MFG: USA

Chris Deinert - Laboratory Supervisor

04/01/13

Date



Quality  
System  
Registrar



LABORATORY  
ACCREDITATION  
BUREAU  
ACCREDITED

Can P L1170-1 Testing

PMX INDUSTRIES, INC. 5300 WILLOW CREEK DRIVE SW, CEDAR RAPIDS, IA 52404-4303

TEL: 319/368-7700 FAX: 319/368-7701 E-MAIL: QA@PMXINDUSTRIES.COM

Revision: 1

ISO 9001:2000 REGISTERED  
ISO/IEC 17025:2005 ACCREDITED



4-3-14  
NAS39186P  
X7228  
*Brink*